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In This Issue

Excellence in education—no one group can hope to fulfil the promise bound up in these three words. The excellence we want for our schools is possible only through the combined efforts of many groups. But perhaps classroom teachers have more opportunity than any other group to translate the ideal of excellence in education into action that can touch the lives of young people.

Recognizing the key role of the teacher in our schools, last spring we invited a group of researchers who are conducting studies on the teacher to share the story of their work with the readers of the *School Review*. In this issue we are presenting the reports we received in response to our invitation.

Why do teachers leave teaching? How can the teacher's personality be assessed? How valuable are self-report tests for predicting teaching effectiveness? What characteristics of teachers affect children's growth? Is there a relationship between the teacher's personality and teaching competence?

These are questions explored in research reports by WILLIAM RABINOWITZ and KAY E. CRAWFORD, of the College of the City of New York; A. S. BARR, of the University of Wisconsin; JOHN CURTIS GOWAN, of San Fernando Valley State College; CARLETON WASHBURNE and LOUIS M. HEIL, of Brooklyn College; and FRED T. TYLER, of the University of California.

We also invited J. W. GETZELS and P. W. JACKSON, of the Department of Education of the University of Chicago, to comment on the research. Their comment follows the reports.

A number of the concerns our contributors discuss are getting attention outside academic circles. During the election campaign just ended questions affecting teachers and teaching were debated before nationwide audiences. This post-election interlude may be an especially appropriate time to consider not only these issues but the questions MARK M. KRUG raises on the contributions social-studies textbooks are making to citizenship education. And this post-election season, when we are especially conscious of our family of states, may be a fitting time to present our first article from the new state of Hawaii—RICHARD S. ALM's postscript to the Conant Report.

THE SCHOOL REVIEW

Volume 68 Winter 1960 Number 4

WILLIAM RABINOWITZ
KAY E. CRAWFORD
College of the City of New York

A Study of Teachers' Careers

Since World War II American education has faced a number of major crises, but the problem that has probably aroused the greatest continuing concern is the inadequate supply of fully qualified teachers. During the past fifteen years, educators have been bombarded with gloomy statistics on births and enrolments clearly demonstrating that there are not, and will not be, in the foreseeable future enough teachers to staff the classrooms of this country.

To meet this crisis widely varying programs have been adopted. Many of these programs are designed to increase the number of able college students who prepare for teaching careers. In the main, the programs have been successful in their avowed purpose, but the shortage continues.

Against this background of concern for alleviating the teacher shortage, about six years ago our office undertook a study of the teaching careers of a group of graduates of municipal colleges. We

WILLIAM RABINOWITZ is an assistant professor in the Office of Research and Evaluation, Division of Teacher Education of the College of the City of New York. KAY E. CRAWFORD is a research assistant in the same office.

were primarily interested in the factors that influence teacher persistence, which may be defined objectively as the length of time following graduation that a teacher-education student spends in teaching.

What are the differences, if any, between teachers who leave the profession soon after entering it and teachers who serve in the profession for years? Are these differences measurable when the subject is a college student? Or do they depend largely on experiences and events that occur after the student has graduated?

The widespread, continuing shortage of trained teachers has made it important to obtain answers to such questions. For many years it has been recognized that the annual rate of teacher turnover is high, although there has been some disagreement as to what the rate actually is. According to a study by the U.S. Office of Education, during the 1957–58 academic year the schools lost 10.9 per cent of their teachers through turnover (1). This figure represented a loss to the teaching profession of 137,000 classroom teachers during the year under study.

In the 1957 report on teacher supply and demand, the Research Division of the National Education Association, while lamenting the dearth of adequate statistics on teacher persistence, concluded quite bluntly:

> The high annual mortality in teaching has not been charged with its enormous share in creating and extending the teacher shortage. Thousands of new teachers are required each year to replace those who, though well prepared, have successful records, and are capable of many more years of effective service, nevertheless leave the profession. Too many times the schools of the nation profit only briefly from a substantial investment in counseling, selecting, training, and inducting into service a person competent to carry out the highly complex task of teaching. Probably the financial loss in this existing routine is not duplicated elsewhere in the professional occupations. But it is the loss of competent personnel that is most to be deplored. Only a careful, patient study of the *reasons teachers leave classroom service* can point the way to a diminution of this loss [2; italics in original].

Charters has suggested that, in selecting teacher-education students, preference be given to those who are most likely to give long service

as teachers (3). The selection of such students would have to be based on research that demonstrated a relationship between predictor measures and subsequent teacher persistence. For the most part, research of this kind is yet to be carried out.

Interest in reducing the teacher shortage is often coupled with a concern for increasing the professional character of teaching. The programs advocated to accomplish these two purposes are often based on appeals to common sense and analogies to other, more securely established professions. Too infrequently are the programs based on objective data on the careers of members of the teaching profession. Accurate information on teacher persistence would seem to be an appropriate base on which to develop procedures for solving the teacher shortage while strengthening teaching as a profession. The study of municipal-college graduates that we shall report was undertaken as a modest contribution to the solid base of needed information.

The study was begun during the 1953–54 academic year when the subjects were all enrolled in the course in student teaching. Since this course is the culmination of the teacher-education program at the municipal colleges, it is usually taken during the Senior year. The subjects of the study were therefore graduated during the 1954 calendar year.

During the semester of student teaching the subjects took a group of personality and attitude tests. The characteristics of the student subjects, as indicated by these tests, have been described in a report issued by our office (4).

In 1955 the first of three questionnaire follow-up studies of these subjects was undertaken. Subsequent follow-ups, each based on a questionnaire mailed to the graduates, were carried out in 1957 and 1959. The findings we shall present in this article are based on these three follow-up studies. Primary emphasis will be placed on the results of the 1959 follow-up study conducted five years after the subjects were graduated from college.

Since the subjects of the study are graduates of the New York

City municipal colleges, it may be instructive to describe these institutions. The College of the City of New York is comprised of four tax-supported municipal colleges: City College, Hunter College, Brooklyn College, and Queens College. Operating under the jurisdiction of the Board of Higher Education, these colleges are open day and evening throughout the year. Almost eighty-two thousand New Yorkers—more than 1 per cent of the residents of the city—are in attendance at these institutions.

One of the largest subgroups of this vast student body is composed of those students—almost twenty-five thousand in number—who are enrolled in teacher-education programs. During 1959, nearly three thousand students, about two-thirds of whom were undergraduates and one-third of whom were graduate students, were graduated after completion of a teacher-education program at one of the municipal colleges.

Each year since 1950, the municipal colleges have prepared about 2 per cent of the national supply of new teachers. The largest single employer of these graduates is the Board of Education of the City of New York. More than 60 per cent of the approximately forty thousand teachers in the New York City public schools are graduates of the municipal colleges (5). In recent years, the school systems of suburban communities have begun to employ municipal-college graduates in increasing numbers. Although most of our graduates teach in the local area, some are employed in schools far from New York City. We have found that teachers from the 1953–54 graduating class have taught in most of the states in this country. Some graduates —many of them wives of servicemen stationed overseas—have taught in schools outside the United States.

Before the results of a survey can be interpreted adequately, an issue that must be resolved is the extent to which the respondents are representative of some larger group to which we wish to generalize our conclusions. The 1953–54 class of student teachers consisted of 1,628 persons, for whom accurate names and addresses were available at the time of graduation. The first follow-up study, in 1955,

brought responses from 91 per cent of the original 1,628 subjects; the second follow-up study, in 1957, brought responses from 81 per cent of the original 1,628 subjects; the third follow-up study, in 1959, brought responses from 70 per cent of the original 1,628 graduates. The per cent of returns in each of the studies was unusually high, although on each successive follow-up the number of respondents decreased.

Statistical tests have failed to detect any differences between the respondents and non-respondents of each follow-up study. We are therefore fairly confident that the individuals who returned our questionnaires are an unbiased sample of the original group of 1,628 graduates.

This conclusion leaves unanswered a larger and more important question. Are the respondents representative of recent teacher-education graduates throughout the United States? Can we, for example, assume that our graduates have had career experiences that are comparable to those of graduates of other colleges? The simplest answer to this question is to recognize that the teacher-education graduates of any particular college are probably unique in many respects.

In the group we studied, women outnumbered men about 8 to 1; the ratio of those who prepared for elementary-school teaching to those who prepared for secondary-school teaching was almost 3 to 1. Undoubtedly at other colleges quite different results would be found. In the nation at large quite different results have been found. Annual studies of teacher supply conducted by the National Education Association indicate that, among college graduates prepared for teaching, women outnumber men by less than 2 to 1; graduates prepared for secondary-school teaching outnumber those prepared for elementary-school teaching, although the disparity has decreased in recent years (6). Thus, our group of graduates contrasts sharply with the national picture with respect to sex distribution and the school level on which they were prepared to teach.

Although the group we studied cannot be considered representative of a national group of teacher-education graduates, we believe

that our findings have more than local significance. An understanding of the forces that condition teacher persistence is so urgent that no reliable data can be ignored. We have tried to generalize the results of our study with restraint, and we trust the reader to correct any excesses of which we may be guilty.

Most of the subjects were at some time after graduation employed as teachers. As we have already noted, of the 1,628 student teachers in the 1953–54 class, 70 per cent, or 1,144 graduates, responded to the follow-up questionnaire sent out in 1959. Almost 40 per cent of the 1,144 graduates who responded to the 1959 questionnaire had taught continuously since graduation from college. Only 6 per cent reported that they had no teaching experience.

Although most of the graduates had some teaching experience, only 50 per cent of the 1,144 respondents were employed as teachers at the time of the 1959 survey—five years after graduation. The high point in the number of subjects employed as teachers was reached in 1955 about a year after graduation when 79 per cent were teaching. In the four years after 1955 there was a steady decline in the per cent of graduates who were teaching. In the fourth and fifth years after graduation there was a net loss in the teaching group of ninety to a hundred individuals. The semester during which the data of the most recent survey were collected was the low point in the per cent of graduates employed as teachers. There is every indication that the per cent of teachers will continue to decline. When will the loss of teachers taper off, and the teacher group begin to stabilize in size? Ultimately, what percentage of the graduates will make teaching a life career? Only future surveys of the group can provide answers.

The greatest personnel losses were found in the group of elementary-school teachers. In 1955, about a year after graduation, there were over six hundred teachers in elementary schools, but five years after graduation there were less than three hundred teachers in this group. Moreover, the group was decreasing in size by about forty to fifty individuals a semester. In contrast, the number of graduates teaching in secondary schools rose from sixty a year after graduation to seventy-two five years after graduation. The group

of teachers in junior high school was decreasing in size, but the rate of decline was not so great as that of the elementary-school group. A year after graduation there were almost one hundred and fifty teachers in this group; five years after graduation there were not quite a hundred.

One interesting aspect of our data relates to the schools in which the New York City elementary-school teachers were employed. The New York City board of education has, for a number of years, classified their elementary schools according to various indices of "school difficulty." In general, a "difficult" school, based on these indices, is one in which many of the pupils are Puerto Rican, have low measured intelligence or low socioeconomic status. Among the subjects of our study, we found that more than half of the New York City elementary-school teachers were teaching in "difficult" schools. Comparable indices for schools other than the elementary schools of New York City are not available, and we therefore do not know how widespread the practice is of assigning inexperienced teachers to schools that could be described as "difficult."

To study the factors related to teacher persistence—the major purpose of the study—it was necessary to classify the graduates according to a meaningful and objective criterion of persistence. On the basis of the most recent data available to us, five years after the subjects were graduated from college, we divided the group of 1,144 who responded in 1959 into three mutually exclusive subgroups:

a) 571 graduates who were then teaching (50 per cent of the group)
b) 508 graduates who had taught at one time but were not then teaching (44 per cent of the group)
c) 65 graduates who had never taught (6 per cent of the group)

We then proceeded to study the relationship between such factors as the sex, age, marital status, and area of preparation of the graduates and their teaching persistence as defined by the three classes.

It seems well to remember that any measure of teacher persistence is inevitably conditioned, in part, by the time at which career information is obtained. Since the survey on which we base the

data to follow was conducted about five years after the subjects' graduation, the relationships that will be described cannot provide the final word on the question of teacher persistence. Additional studies of these and other graduates will be needed to provide a reasonably complete picture.

Striking differences in the teaching persistence of men and women were found. More than three-fourths of the 130 men respondents were teaching five years after graduation, while less than half of the 1,014 women respondents were doing so. Women were more likely to have entered teaching than men (5 per cent of the women and 11 per cent of the men had no teaching experience), but men, once they began teaching, were more likely to remain.

The age of the graduate was also clearly related to teacher persistence. Among the eighty-one respondents who were between thirty and fifty years of age at the time of graduation, only 2 per cent had never taught while 89 per cent had entered teaching and were teaching five years later. The youngest graduates, those between nineteen and twenty-two years of age at the time of graduation, present a sharply contrasting picture. In this group composed of 866 individuals we found that 6 per cent had never taught and another 48 per cent had entered teaching but were not teaching five years after graduating from college. Among the 190 respondents who were between twenty-three and twenty-nine years of age at the time of graduation, 7 per cent had never taught while 35 per cent had entered teaching but five years later were no longer teaching.

The influence of marital status on teaching persistence was suggested by the findings of age and sex. The number of married graduates rose steadily following graduation; 60 per cent of the 130 men and over 80 per cent of the 1,014 women were married at the time of the 1959 survey.

In Table 1 the relationship of persistence to marital and family status is presented for the women graduates. The most striking phenomenon revealed by the table is the contrast in persistence between the married teachers who had one or more children under five years of age and the three other groups. More than 90 per cent

of the women who were unmarried and those who were married with all of their children over five years of age were employed as teachers. Among those who were married but had no children, a slightly larger per cent left teaching after a period of employment. But the group of respondents who were married and had children under five years of age was composed overwhelmingly of former teachers. Less than 10 per cent of this group was teaching five years after graduation.

TABLE 1

TEACHER PERSISTENCE AS RELATED TO THE MARITAL AND FAMILY STATUS OF 974 WOMEN GRADUATES IN 1959*

Status	Total Number	Now Teaching		Taught but Left		Never Taught	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
Unmarried	188	173	92	11	6	4	2
Married:							
Without children	212	174	82	32	15	6	3
With children under five years of age	525	47	9	436	83	42	8
With children five years of age or older	49	47	96	2	4	...	..
All women graduates	974	441	45	481	49	52	6

* Does not include 40 respondents who did not indicate their marital or family status.

No other factor isolated in our study was so highly related to persistence as that of family status among women. Clearly the women teachers who do not persist are not simply those who marry, nor are they those who have children to care for. The factor that is crucial is the presence of preschool children. Apparently in the competition between the duties of a teaching position and the responsibilities of child-rearing, it is the teaching position that yields.

Although marriage and family factors have an effect on the teaching persistence of the men, the influence is not so strong as it proved to be among the women. Married men, particularly those with children, were more likely to report no teaching experience than their counterparts. In addition, five years after graduation, a larger per cent of unmarried than married men were employed as teachers. None of these differences, however, is so striking as those found in Table 1.

Among married women, we found that the income of the husband

was related to teacher persistence. In general, the lower the income of the husband, the more likely it was that the wife had entered teaching and was still teaching five years after graduation. For example, 51 per cent of the 245 women whose husbands earned less than $6,000 a year were employed as teachers at the time of the most recent survey. Two per cent of these women reported no teaching experience. Only 28 per cent of the 417 women whose husbands earned more than $6,000 a year were teaching, while almost 8 per cent had never taught. It is evident that economic factors play a role in conditioning the decisions of women graduates to enter and remain in teaching positions.

The school level on which the subjects prepared to teach while in college was also related to persistence. Those who prepared for secondary-school teaching proved to be more persistent, once they had entered teaching, than their elementary-school colleagues. Although 13 per cent of the 287 respondents who prepared for secondary-school teaching had no teaching experience, only 31 per cent had entered teaching and then left. Among the 854 respondents who prepared for elementary-school teaching, 3 per cent had never taught, while 48 per cent had taught but were not teaching five years after graduation. In interpreting these figures it is important to recognize that the proportion of men and women at the two levels of preparation are not equal. Men were to be found primarily among those prepared for secondary-school teaching. Since men were more persistent than women, their tendency to prepare for secondary-school teaching rather than for elementary-school teaching accounts in part for the differences just noted.

The last factor we found to be related to teaching persistence was the subjects' satisfaction with their student-teaching experience. At the conclusion of their student-teaching course, the subjects were given an inventory designed to measure their attitude toward student teaching. Among the 250 respondents who were least satisfied with their student-teaching experience, 10 per cent had never taught, whereas in the most satisfied group—composed of 253 respondents—only 1 per cent had never taught.

The data we have discussed thus far deal with persistence as objectively defined by the graduates' teaching status five years after their graduation from college. From these data we cannot tell how long those who were teaching planned to continue as teachers. Nor can we tell how many of those who were not teaching planned to enter or re-enter teaching. To obtain this information, all the graduates—both those who were teaching and those who were not—were asked to respond to questions on their future teaching plans.

We shall discuss first the teaching plans of the 571 subjects who were teaching in 1959 at the time of the third survey. About 45 per cent of these teachers expressed an intention to continue teaching indefinitely or until retirement. The remaining 55 per cent planned to continue teaching for a specific period of time, usually one or two years more, or else expressed uncertainty about their plans.

A number of factors proved to be related to teaching plans. The men teachers, far more than the women, planned to continue teaching indefinitely. Almost 80 per cent of the 101 men gave this response, whereas less than 40 per cent of the 470 women did so.

The more mature teachers—those between thirty-five and fifty-five years of age at the time of the survey—planned to continue teaching indefinitely more often than their younger colleagues. Although this tendency was found among both men and women teachers, it was quite marked among women. For example, the more mature group of women consisted of seventy individuals, 69 per cent of whom said they planned to teach indefinitely. Only 27 per cent of the 196 women teachers between twenty-five and twenty-seven years of age gave this response.

Among the men, marriage and family status showed almost no relation to teaching plans. The unmarried men were more likely to indicate that their plans were uncertain than their married colleagues, but this difference was not very great. Among the women, however, marriage and family status was highly related to teaching plans. Less than 20 per cent of the 212 married women who had no children planned to teach indefinitely. This figure rose to 52 per cent among the 188 unmarried women and to 62 per cent among

the 49 married women whose children were all over five years of age.

Respondents who as undergraduate students had prepared for secondary-school teaching were slightly more likely to express an intention to continue teaching indefinitely than those who had prepared for elementary-school teaching. In the secondary-school group, 82 per cent of the 65 men and 46 per cent of the 96 women expressed this intention. In the elementary-school group, the response was made by 73 per cent of the 36 men and 36 per cent of the 374 women. Since the relationship between area of preparation and an intention to teach until retirement is present among both men and women, the relationship cannot be attributed to the tendency of men to prepare for secondary-school rather than elementary-school teaching.

To study the influence of economic factors on teaching plans the 571 graduates who were teaching were asked, "What is your present annual salary from your teaching position?" Responses ranged from below $4,000 to $7,600 a year. Almost three-fourths of the subjects who were teaching were earning annual salaries between $4,800 and $6,000, with slightly higher salaries reported by the men. Salary proved to be a factor related to teaching plans, particularly among the men. Of the 265 subjects who earned less than $5,200 a year, 70 per cent of the 40 men and 37 per cent of the 225 women planned to teach indefinitely; of the 306 subjects who earned more than $5,200 a year, 84 per cent of the 61 men and 41 per cent of the 245 women expressed such a plan.

Related to salary are the answers given by the teachers to the following question, "During the course of the year do you generally take on additional employment?" An affirmative response was given by 77 per cent of the 101 men and 20 per cent of the 470 women. In both groups, an intention to teach indefinitely was reported slightly less often by those who took additional employment during the course of the year than by those who did not.

The 571 subjects who were teaching were also asked, "In general, how satisfying have your teaching experiences been?" Four response

statements were given on the questionnaire, to which the teachers responded as follows:

	Men		Women	
	Number	Per Cent	Number	Per Cent
Very satisfying	38	38	225	48
Fairly satisfying	41	40	188	40
OK but not too satisfying	19	19	52	11
Not satisfying at all	3	3	5	1
Total	101	100	470	100

These results indicate that although both men and women generally expressed strong or moderate satisfaction in their teaching experiences, the men were slightly more inclined than the women to express reservations or open dissatisfaction.

As one might expect, there is a relationship between expressed satisfaction with teaching and an intention to continue teaching until retirement. The relationship was found among both the men and the women, although in neither group was the relationship very strong. Thus, 48 per cent of those who were "very satisfied" with their teaching experiences intended to teach indefinitely. This figure fell to 44 per cent among those who were "fairly satisfied" and to 42 per cent among those who considered their teaching experiences "OK but not too satisfying." Only two of the eight teachers who said "not satisfying at all" planned to continue teaching indefinitely.

The relationship between the "difficulty" of the school in which a teacher is employed and the teacher's plans to continue teaching is of great interest since it has often been said that the high rate of turnover in the teaching profession is, in part, the result of a tendency to assign beginning teachers to the most difficult schools. A test of this assertion is usually impossible since no objective measure of "school difficulty" is available. As noted earlier, however, New York City elementary schools are categorized on a "difficulty" index. The teaching plans of the 226 respondents who were employed in New York City elementary schools were therefore examined. Of the 117 graduates who were teaching in "difficult" schools, 41 per cent planned to teach indefinitely; of the 109 graduates who were teaching in other elementary schools—not classified as "difficult"

—49 per cent planned to teach indefinitely. These results indicate that teaching plans are related to "school difficulty," though the relationship is a modest one.

The teaching plans of the respondents were studied in relationship to a number of other factors, including: satisfaction with student teaching, teaching status (regular or substitute teacher), number of graduate credits earned, membership in professional teachers' organizations, and desire for a different school position. None of these factors, however, showed any consistent or noteworthy relation to teaching plans.

Another facet of the teaching plans of those who were employed as teachers was obtained through the question, "In the near future, do you intend to seek any school position other than the one you now hold?" A negative response was given by 40 per cent of the 101 men and 74 per cent of the 470 women. Those who gave affirmative replies were asked to specify the school position they intended to seek. For the men a supervisory or administrative position proved most popular. It was indicated by thirty-five out of the sixty men who intended to change their school position. A supervisory or administrative position had far less appeal for the women teachers. Only fifteen of the 108 women who planned to change their school position were seeking such a post. The women teachers were far more likely to be seeking a position in a different school or at a different level in the public school system or as a specialist of some kind. These data clearly indicate the greater ambition of the men teachers. Not only did a larger per cent of men than women intend to obtain a different school position, but the men expressed a far stronger interest in positions offering higher status and rewards.

We turn now to the data on the teaching plans of the 573 subjects who were not teaching five years after graduation, the non-teachers. These graduates were asked, "Do you intend to teach in the future?" Table 2 is based on the responses of 562 graduates; eleven of our respondents did not answer this question. The responses of former teachers as well as graduates with no teaching experience are included in the results. Those who had once taught were far more

interested in returning to teaching than those with no teaching experience. Of perhaps greatest importance is the large per cent of the total group of non-teachers who intended to teach in the future and the small per cent who definitely did not intend to do so. Quite obviously we have here a rich potential source of teacher supply.

The teaching intentions of the 562 non-teaching graduates were studied in relation to a number of factors, which will be discussed.

TABLE 2

TEACHING PLANS OF 562 GRADUATES WHO WERE NOT TEACHING IN 1959*

Response to Question	Graduates with No Teaching Experience		Former Teachers		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Do you intend to teach in the future?						
Yes	19	30	308	62	327	58
No	23	35	25	5	48	9
Undecided	23	35	164	33	187	33
Total	65	100	497	100	562	100

* Does not include 11 respondents who did not answer the question.

The purpose of the analyses was to obtain a clearer picture of the forces that condition a subject's decision to enter or re-enter teaching.

A comparison of the intentions of men and women is not too instructive because most of the non-teachers were women. Of the 562 non-teachers who answered the question on teaching plans, only twenty-eight were men. Differences in the teaching plans of men and women are, however, of sufficient interest to justify a comparison in spite of the fact that the per cents for the men were computed on a small numerical base. In responding to the question about their intentions, 36 per cent of the men said they intended to teach in the future, and an equal per cent said they did not intend to do so. Among the 534 women, 59 per cent said they intended to teach in the future, and 8 per cent said they did not. The women were obviously more interested in future teaching positions.

The factor of age was related slightly to plans to teach in the future. Among the 474 younger respondents—those between twenty-four and twenty-seven years of age at the time of the survey—61 per cent intended to teach and 5 per cent did not. Of the 88 respondents

who were over twenty-seven years of age, 56 per cent intended to teach and 12 per cent did not.

The overwhelming majority of the non-teachers (488 of the total group of 573) were married and had young children. It was also this group that had the largest per cent of respondents (60 per cent) who intended to teach in the future. Only 30 per cent of the forty-four non-teachers who were married and had no children reported that they intended to teach in the future, while 56 per cent of the small group of twenty-five unmarried non-teachers gave this response.

The non-teachers who as college Seniors were most satisfied with their student-teaching experiences were slightly more likely to indicate that they intended to return to teaching than those who were least satisfied. In the "dissatisfied" group consisting of 138 subjects, 49 per cent intended to teach in the future while 12 per cent did not intend to do so; among the 127 individuals in the "highly satisfied" group the corresponding percentages were 62 per cent and 7 per cent.

Among the non-teachers, the 508 graduates who had taught were asked, "In general, how satisfying were your teaching experiences?" The overwhelming majority of the 487 respondents who answered the question indicated strong-to-moderate satisfaction, as shown in the following results:

	Number	Per Cent
Very satisfying	247	51
Fairly satisfying	168	34
OK but not too satisfying	51	10
Not satisfying at all	21	4
Total	487	99

The relationship between satisfaction with teaching and teaching plans is presented in Table 3. The data show clearly that an intention to return to teaching is closely related to the former teachers' evaluation of their teaching experiences. As satisfaction with teaching experiences decreased, there was a corresponding decrease in the per cent of those who intended to return to teaching and an increase in the per cent of those who were either undecided about their future plans or had decided not to teach.

A number of additional factors were studied in relation to teaching plans, among them: the number of graduate credits obtained by the respondent, the amount of teaching experience acquired by

TABLE 3

TEACHING PLANS OF 487 GRADUATES WHO WERE NOT TEACHING IN 1959 AS RELATED TO THEIR EVALUATION OF THEIR TEACHING EXPERIENCES*

Evaluation of Teaching Experience and Plans for Future Teaching	Number	Per Cent
Experience highly satisfying:		
Plan to teach	178	72
Do not plan to teach	5	2
Undecided	64	26
Total	247	100
Experience fairly satisfying:		
Plan to teach	97	58
Do not plan to teach	9	5
Undecided	62	37
Total	168	100
Experience OK but not too satisfying:		
Plan to teach	20	39
Do not plan to teach	10	20
Undecided	21	41
Total	51	100
Experience not satisfying at all:		
Plan to teach	2	10
Do not plan to teach	5	24
Undecided	14	67
Total	21	101
Total:		
Plan to teach	297	61
Do not plan to teach	29	6
Undecided	161	33
Total	487	100

* Does not include twenty-one respondents who did not answer the question.

the respondent, and the length of time since the respondent last taught. None of these variables showed any consistent relationship with teaching plans.

The well-publicized shortage of teachers has inevitably led to measures designed to increase the teacher supply. Among these measures, recruitment programs to encourage college students to enter teaching have received much emphasis. The success of these recruitment efforts is apparent in the data collected by the Research Division of the National Education Association (6). Since 1948 the per cent of all American college graduates who prepared for teaching has

increased fairly steadily. In New York City a similar trend toward increased enrolments in teacher-education programs is revealed by a semiannual census of the student body of the municipal colleges.

To an educator oppressed by the grim realities of teacher supply and demand, evidence that more and more college students are preparing for teaching is encouraging. But what is the ultimate significance of this increase in prospective teachers? It is obvious that we cannot relieve the teacher shortage by merely increasing the potential supply of teachers; we must educate students who will enter teaching and who, once employed, will remain to make teaching a long-term career. How many of the nearly 140,000 newly trained teachers who will be graduated from American colleges this year will be able to meet this test?

No precise answer to this question is, of course, possible at present, but it seems evident that only a small per cent are likely to become career teachers. In our study we found that only 50 per cent of the graduates were teaching five years after graduation. Moreover, the proportion of teachers was declining sharply with no indication that it would soon stabilize. The data on teaching plans provide additional evidence that the teacher group will continue to shrink.

Many factors were related to teachers' leaving the profession after brief employment, but family obligations were primary. The group of former teachers was composed overwhelmingly of young married women with preschool children. Almost all the graduates who left teaching had a young child—or were soon to have a child. Thus, the college graduates who are most likely to resolve the conflict between family obligations and career plans by leaving teaching are young women. For many reasons, this is precisely the student group most attracted to teaching as an occupational field. Although colleges cannot, and probably should not, discourage such students from applying for teacher education, more active encouragement of those students who are most likely to persist seems essential.

Who are these more persistent teachers? In our study the men were more persistent than the women. About three-fourths of the men were teaching five years after graduation, while less than one-half of the

women were so employed. For the preceding two years the size of the male teacher group remained fairly stable; during the same period, we found a steady decline in the size of the female teacher group. This finding of greater male persistence must be considered, moreover, in the light of the widespread desire among men for supervisory and administrative positions. If their ambitions are realized, many of the men teachers will some day provide educational leadership as principals, department chairmen, or in other administrative posts.

To attract more men to teaching as a career is surely not a simple matter. One important factor isolated in our study is the influence of salary levels on teacher persistence. Men, particularly married men, were more likely to have had no teaching experience than women. It seems probable that many of the male teacher-education graduates did not enter teaching because salaries were too low. More direct evidence on the importance of salaries is to be found in an examination of the teaching plans of those graduates who were employed as teachers five years after graduation. Those who were earning higher salaries were more likely to indicate plans to teach until retirement than those who were in less fortunate financial positions. This finding, moreover, was true of women teachers as well as men. It is also significant to note that more than three-fourths of the male teachers reported that during the year they generally took additional employment.

Another relatively persistent group is composed of those students who at the time of graduation were thirty years old or older. As one might expect, this is a small group; only eighty-one graduates, or 7 per cent of all 1,144 subjects, met this criterion. Most of these more mature graduates were married women whose children were all over five years of age. Though numerically a small part of the total group of graduates, their persistence record was exemplary. Five years after graduation, 89 per cent were employed as teachers, while less than 50 per cent of their younger counterparts were so employed. The data on teaching plans show, moreover, that they have a stronger commitment to teaching as a lifetime career.

If colleges are to recruit students who will give longer service as teachers, our study indicates that two groups might well be the focus

of concern: men students and older women students. These graduates have not only produced a better record of persistence, they more often report that they intend to teach indefinitely. Woodring has described a number of teacher-education programs especially adapted to the characteristics and the needs of more mature college graduates (7). Our data on persistence support the wisdom of such programs.

The responses to the question about the teaching intentions of those who were not employed as teachers suggest a further source of teacher supply. Almost 60 per cent of these non-teachers said that they intended to teach in the future; less than 10 per cent expressed an intention not to teach in the future.

At present, it is impossible to tell how many of these subjects will actually take teaching positions in the future. Since our office intends to continue to study the careers of these graduates, future surveys can be expected to shed light on this question. Lacking the relevant data, it would be unwise to assume that the present intentions of the non-teachers will correspond to their future behavior. Undoubtedly, many who now intend to take teaching positions at some later date will not do so. Nevertheless, the high proportion of those who intend to teach suggests that this group may be an important source of future teachers. If even a small percentage of those who in recent years have been employed as teachers, but are not now teaching, could be encouraged to re-enter teaching, a substantial reduction in the teacher shortage could probably be effected.

The recent study of teacher turnover by the U.S. Office of Education makes it clear that former teachers—particularly former women teachers—are an important source of supply of the new teachers needed each year (1). During the 1957–58 academic year, approximately 56,800 former teachers re-entered the profession. This group constituted one-fifth of all the teachers hired during that year. The report comments, "One of the prime sources of supply of teachers each year . . . is the 'pool' of experienced teachers who have left the profession for one reason or another."

The prospect of reducing the teacher shortage by encouraging former teachers to return to the classroom is attractive but is not with-

out its difficulties. The overwhelming majority of the non-teachers are married women with young children. Almost all these women expressed an intention to return to teaching or were undecided about returning to teaching. In clarifying their plans, however, these women made it clear that they would seriously consider re-entering teaching only when their children were old enough. The criterion of "old enough," when it was specified, usually was the age at which a child entered nursery school, kindergarten, or elementary school.

It is thus apparent that almost none of the former teachers in our study is now available for a teaching position. In general, they will not become available until they have been unemployed as teachers for at least five or six years and probably longer. But it may be possible to shorten this period. One solution is nursery schools for the preschool children of former teachers who return to teaching. These nursery schools could be located close to the schools in which the former teachers were employed. The hours during which the children would be in attendance and the schedules of holidays and vacations could be geared to the teaching obligations of the mothers. It would be important for such schools to be tuition-free so that no unnecessary financial obligation would be imposed on the working mothers.

We recognize that the idea of maintaining nursery schools for the children of former teachers who return to teaching is fraught with complications. Probably only the largest school systems or those with the most severe shortage of teachers can consider the idea seriously. Even if it were to be widely adopted, it is likely that many former teachers would prefer to return to teaching only after their children were old enough to enter elementary school.

It is easy to recognize some of the difficulties in inducing these women to return to teaching after they have been professionally unemployed for more than six years. Their maternity leave will almost surely have expired. Some will face the often tedious task of obtaining a new teaching license. In most cases, their husbands will be earning more money and the financial incentives of the teacher's salary will have declined. Our data showed a definite relationship between teacher persistence and husband's income. It is reasonable to expect

a similar relationship between re-entry into teaching, or failure to do so, and husband's income. There are finally the more intangible factors that may influence the former teacher's ultimate decision. After being "out of teaching" for perhaps eight to ten years a woman may well ask: "Am I too old to return?" "Will I be able to teach and at the same time be a good wife and mother?" "If I go back to teaching, will I find that I no longer remember how or what I'm to teach?" Faced with these and other anxieties, the former teacher may well forego the opportunity to re-enter teaching.

Unless the inducements are strong, many former teachers who now expect to teach again will probably, when the opportunity arises, not do so. To develop the necessary inducements will require imagination and perhaps a willingness to experiment. Colleges can co-operate by organizing special programs of teacher education and re-education for former teachers. Such programs will have to take into account the unique background and characteristics of this group. The public schools can co-operate by liberalizing their procedures for licensing the teachers and assigning them to schools. The teachers will undoubtedly require sympathetic supervision. Providing this supervision can be a co-operative venture of the college and the public school.

The data on the "difficulty" indices of the New York City elementary schools in which some of the graduates were teaching deserve a final comment. It is probably true that, wherever teachers are employed, many of those who are just beginning their careers are given the most difficult assignments. The more desirable positions tend to be pre-empted by the teachers with the greatest seniority. It is therefore hardly surprising that a large proportion of the subjects in our study who were teaching, or had taught, in New York City elementary schools were employed in schools classified as "difficult." No matter how common the practice may be, the assignment of relatively inexperienced teachers to such schools is not easily defended. There is some evidence that beginning teachers in New York City tend to refuse such assignments (8), but what of those who accept? How are they affected by the experience of teaching in schools that present such unusual problems? The great number of con-

tinuing vacancies in these schools, compared with the number of vacancies in other schools, suggests that the teachers do not find the experience pleasant or salutary. Our data confirm this belief. The subjects teaching in the more "difficult" elementary schools in New York City, when responding to the question about their intentions to continue teaching, were more often "undecided" than those in the less "difficult" schools. The latter group more often expressed an intention to continue teaching indefinitely. Although the differences in teaching intentions between the teachers in the more and the less "difficult" schools were not impressive in size, they were consistent and disquieting.

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A. S. BARR
University of Wisconsin

The Assessment of the Teacher's Personality

Many educators believe that the teacher's personality is important in teacher effectiveness, and research seems to support the belief. Personality may be considered a factor in teacher effectiveness in somewhat the same way as scholastic proficiency, understanding of children, or verbal fluency. Whether one considers personality as a factor in teacher effectiveness depends on how one conceives of personality and its relation to the means, goals, and processes of education. In any case, the problem of personality assessment as it relates to teachers' effectiveness merits thoughtful consideration.

There are many theories of personality. As the word *personality* itself suggests, most of these theories relate to characteristics of the person; thus we speak of *personality traits.* Another way of looking at the subject, however, is to consider not qualities of the person but characteristics of performance or behavior. Whichever approach is used, there is trouble ahead, since almost any approach has limitations and advantages. For this discussion we have chosen to make a behavioristic approach.

In pursuing such an approach, we must recognize that we remove from consideration such aspects of personality as height, weight, age, complexion, bodily proportion, and physique. These are static aspects of personality, unless they can be translated into behavioral equivalents. Even though these aspects of personality may present difficulties to those who would interpret personality in behavioral terms, a behavioristic approach still has advantages, particularly since the behavioral approach makes it possible to integrate the concept of per-

A. S. Barr is a professor of education at the University of Wisconsin.

sonality with that of methods of teaching. In a sense method, broadly conceived, encompasses all teacher behavior and thus personality. If we approach the problem in this way our concern expressed as a question becomes: Can descriptions of behavior provided by such terms as *considerateness, co-operativeness, expressiveness, objectivity, ethicality,* provide helpful ways of considering teacher effectiveness? Possibly, though perhaps the whole approach is too remote to have any great practical value. Perhaps some other approach would be better.

Psychology has defined the conditions for effective learning in terms of certain principles of learning. This suggests the question: Are the techniques of teaching that are presumed to grow out of learning theory encompassed by the behavioral aspects of personality, or are the behaviors found in the techniques of teaching something different? Possibly techniques of teaching grow out of another constellation of values that one needs to keep in mind. Possibly there is some unique constellation of human relationships that behavioristically constitute the essence of personality and another constellation of teacher activities that constitute technical competency.

If we attempt to characterize behavior in such broad terms as those suggested here, we must give some attention to choosing and defining the aspects of behavior that appear to be pertinent to teacher effectiveness. Many words in a standard collegiate dictionary purport to describe behavior. How does one choose from these? The literature gives the impression that the choice of vocabulary has rested pretty much on personal preference.

Some years ago the writer served on a professional jury that was attempting to prepare a short list of descriptive terms to be used in teacher evaluation. More recently the author compiled a list of terms used to describe teaching effectiveness in studies on the measurement and the prediction of teacher efficiency (1). The projects made it clear that we need a commonly accepted list of the aspects of behavior to be considered. Once a list is agreed on, each term in the list must be defined.

Before turning to problems of definition, there are several questions one might ask about the list. How long should it be? How much overlap can one expect or tolerate? Are qualities of behavior to be looked on as supplementary or complementary, or may they be conflicting? Are there hierarchies, patterns, or sequences of behaviors or aspects of behavior that we should consider? Can some aspects of behavior be thought of as superficial, unimportant, or trivial and others as basic, highly potent, and primary? Should the terms used to describe teacher behavior reflect some particular philosophy of education, theory of learning, or concept of desirable teacher-pupil relationship?

To provide acceptable working definitions of the descriptive terms to be used in such an adventure is extremely difficult. Presumably, in keeping with a behavioristic approach all definitions need to be operational definitions. What does a reliable, emotionally stable, and resourceful teacher do? If judgments about teachers are to be based on observations of teachers' behaviors, how do we know what to look for? What to ignore? Over and above the counting of behaviors, there is, thus, the matter of pertinency. Whether a behavior, or aspect to behavior, is pertinent depends on how the behavior or the aspect is defined. If the list of terms is highly condensed, many subtle shades of meanings will probably need to be considered.

Having listed and defined the terms to be used, we may then turn to the collection of the data. Aside from pertinency, other questions must be considered: By what means may observers reach sound judgments about whether the teacher behavior observed is to be considered as evidence of the presence or the absence of some particular characteristic? Are there extenuating circumstances to be considered in passing judgment on the behavior under observation? Can behavior be considered out of context? What aspects of the context should one consider? Is the noting of the presence and absence of behaviors sufficient? What dimensions of behavior should one consider? Is counting enough, or should the behaviors be evaluated according to some scale of values? As skilled observers know, teachers do not all have the same qualities. How does one summarize the data? Should

we consider isolated behaviors or patterns of behaviors? Is the importance of items of behavior as contrasted with the mere presence or the absence of behavior a matter to be considered? Degree of pertinency? Extent? Duration? Intensity? How will the score, if there is a score, be expressed?

When one attempts to reach some over-all judgment about teacher effectiveness from judgments about the separate aspects of behavior, one is confronted with a troublesome necessity. It is common practice to calculate some sort of average, but can we safely assume that the data can be added? Is an average an adequate representation of the data? Do some aspects of behavior have special potencies in and of themselves? Are there upper and lower cutoff points? May a teacher's over-all efficiency rest on the presence or absence of some particular quality of behavior? Do various combinations of behaviors or qualities have particular significance?

If one may judge from the literature or from the vocabulary of people who talk about the effectiveness of teachers or from letters recommending teachers for positions, it would appear that there is some basis for talking about teachers in terms of personality traits or the quality aspects of behavior, but much needs to be done with the word *personality* before this approach can be useful. One might correctly say that, notwithstanding the tremendous amount of time, money, and energy expended on this approach, the adventure has not been particularly successful. Possibly, however, with more care in choosing, defining, scaling, and summarizing values the adventure may be more successful; or possibly some other concept will have to be substituted for it.

For a new look at personality testing the writer recently used an approach somewhat different from those commonly used to secure information on teachers' self-perception and the perception of others concerning certain qualities thought to be associated with teacher effectiveness (2). The instrument, which calls for forced judgment, was drawn on a plan somewhat different from the paired-comparison scale. The instrument is not presented as a completed one. Actually,

it may create more problems than it solves, but it does illustrate certain difficulties associated with personality assessment. The approach is behavioristic, and there is some attempt to define terms. While the scale is an instrument for self-evaluation designed to be used by teachers, the approach can be used to assess supervisors, principals, and superintendents. By comparing scores and related data one may reach a judgment about the professional compatibility of teachers and administrators. Responses may be based on past experience with various types of educational personnel, or responses may be based on current behavior in situations where purposes, conditions, and achievements can be more precisely defined.

In Part A of the instrument, the participant is asked to rank himself on fifteen qualities thought to be associated with teacher effectiveness. He is also asked to rate the administrators with whom he has worked and his fellow teachers on both their value systems and their observed behavior. In Part B of the instrument the participant is asked whether he thinks he possesses "more" or "less" of each of fifteen qualities than other teachers, administrators, and members of another profession, such as law. In Part C, he is asked whether he thinks that school administrators and other teachers and finally whether he himself has "little" or "much" of each of the fifteen qualities.

To fill in the scale is tedious, but personality is complex and most attempts to evaluate it are oversimplifications. The ranking of fifteen items is difficult. Few people think of themselves as the scale asks them to. Certainly few people think of themselves as precisely as the scale asks them to. The experience of performing such a task raises all sorts of questions. We may even ask whether the personality approach to the study of teacher behavior is worth the effort devoted to it. The answer to this question should not be sought in personal preference but in further research.

The scores on Part A of the scale are coefficients of correlation calculated by any one of the several methods. The author has used the rank difference method of calculating these coefficients. Some of the correlations are related to self-perception and some to the perception of others. If one attempts further interpretation, some of the scores

might be interpreted as self-sufficiency scores; and others, as measures of realistic self-perception, should this be a matter of concern. In Parts B and C scores are obtained by counting responses. These scores may be compared with those of Part A as part of a study of consistency. If the scale is used again later on, further information can be had on consistency. As one examines the information secured through such an instrument, it seems reasonable to ask: Is it possible to secure in this manner predictions about the behavior of teachers that will be more accurate than predictions arrived at by other approaches—predictions that will be useful in employing teachers or in engaging in school improvement? The question calls for further research.

The qualities used in the scale were condensed from many lists of descriptive terms used to characterize the behavior of teachers. The descriptive terms are referred to as *qualities,* but the term *quality* is used to describe behavior, not to designate the constituents of persons or traits. It is thought that the behavior of individuals will exhibit these qualities with varying degrees of consistency. It is expected that some qualities will be exhibited with high levels of consistency almost without exception, and others with less consistency. An attempt was made to distinguish between surface traits and source traits. These descriptive terms as a group are assumed to encompass the basic prerequisites to teacher effectiveness when expressed as qualities of behavior.

Because the words used in the scale may mean different things to different people, it seemed best to start with some consideration of the many meanings attached to each word. Important characteristics of behavior can be designated verbally in a variety of ways. Some of the synonyms thought to be associated with each of the fifteen qualities are listed below:

1. *Buoyancy*—Optimism, enthusiasm, cheerfulness, gregariousness, fluency, talkativeness, sense of humor, pleasantness, carefreeness, vivaciousness, alertness, animation, idealism, articulation, wittiness.
2. *Considerateness*—Concern for the feelings and well-being of others, sympathy, understanding, unselfishness, patience, helpfulness.
3. *Co-operativeness*—Friendliness, easygoingness, geniality, generousness,

adaptability, flexibility, responsiveness, warmheartedness, unselfishness, charitableness.

4. *Emotional stability*—Realism in facing life's problems, freedom from emotional upsets, constancy, poise, self-control.
5. *Ethicalness*—Good taste, modesty, morality, conventionality, cultural polish, refinement.
6. *Expressiveness*—Skill in expression, verbal fluency, vivaciousness, communicativeness, literateness.
7. *Forcefulness*—Dominance, independence, self-sufficiency, determinedness, purposefulness, persuasiveness.
8. *Intelligence*—Mental alertness, academic aptitude, capacity for abstract thinking, power to comprehend relationships.
9. *Judgment*—Wisdom in the selection of appropriate courses of action, discretion in dealing with others, foresight, prudence, common sense, clearheadedness.
10. *Objectivity*—Fairness, impartiality, open-mindedness, freedom from prejudice, sense of evidence.
11. *Personal magnetism*—Dress, physique, absence of defects, personal magnetism, neatness, cleanliness, posture, personal charm, appearance.
12. *Physical energy*—Readiness for effective action, force, vigor, energy, eagerness to succeed, ambition, motivation, vitality, endurance.
13. *Reliability*—Accuracy, dependability, honesty, punctuality, responsibility, conscientiousness, painstakingness, trustworthiness, sincerity.
14. *Resourcefulness*—Capacity for approaching things in a novel manner, initiativeness, originality, creativeness, enterprisingness.
15. *Scholastic proficiency*—High scholastic aptitude, high scholastic grade point average, thorough knowledge of subject matter, well informed on many subjects, high verbal aptitude, widely read.

Many characteristics are associated with teaching success, and the words used to indicate these characteristics have many meanings, as the many synonyms listed indicate. To further orient the respondent, he was given a word-meaning test on the fifteen qualities. In this test he was asked to underline three words or groups of words that best expressed his understanding of the term under consideration:

I. *Buoyancy*
(1) Enthusiasm (2) Optimism (3) Vivaciousness (4) Cheerfulness (5) Bouncing (6) Wittiness

II. *Considerateness*
(1) Sympathy (2) Easygoingness (3) Unselfishness (4) Understanding (5) Patience (6) Helpfulness

III. *Co-operativeness*
(1) Friendliness (2) Positiveness (3) Flexibility (4) Unselfishness (5) Adaptableness (6) Easygoingness

IV. *Emotional stability*
(1) Self-control (2) Constancy (3) Punctuality (4) Dependability (5) Unemotionality (6) Unsympatheticness

V. *Ethicalness*
(1) Modesty (2) Morality (3) Conventionality (4) Prudishness (5) Refinement (6) Respectability

VI. *Expressiveness*
(1) Talkativeness (2) Vivaciousness (3) Communicativeness (4) Verbal fluency (5) Literateness (6) Intelligibility

VII. *Forcefulness*
(1) Determinedness (2) Persuasiveness (3) Courageousness (4) Purposefulness (5) Dominance (6) Proneness to action

VIII. *Intelligence*
(1) Mental alertness (2) Academic aptitude (3) Capacity for abstract thinking (4) Sagaciousness (5) Power of comprehending relationships (6) Practical insightedness

IX. *Judgment*
(1) Common sense (2) Discretion (3) Foresight (4) Wisdom (5) Capacity for unbiasness (6) Clear thinking

X. *Objectivity*
(1) Impartiality (2) Unemotionality (3) Factuality (4) Open-mindedness (5) Unprejudicality (6) Faithfulness

XI. *Personal magnetism*
(1) Cleanliness (2) Seduciveness (3) Neatness (4) Sociability (5) Physical attractiveness (6) Comeliness

XII. *Physical energy, drive*
(1) Persistence (2) Vitality (3) Ambition (4) Endurance (5) Vigor (6) Restlessness

XIII. *Reliability*
(1) Honesty (2) Accuracy (3)Punctuality (4) Dependability (5) Responsibility (6) Trustworthiness

XIV. *Resourcefulness*
(1) Self-sufficiency (2) Originality (3) Uninhibitedness (4) Creativeness (5) Enterprisingness (6) Initiativeness

XV. *Scholastic proficiency*
(1) Good school grades (2) Love of books (3) Love of the abstract (4) Learnedness (5) Wisdom (6) Rationality

In the search for patterns of response, the ranking of the fifteen

items was carried out in a prescribed manner. In filling in the scale, the participant was asked first to consider the items in groups of three:

The three qualities most characteristic of the respondent's behavior
The three qualities least characteristic of the respondent's behavior
The three that appear to be average
The three above average
The three below average

This exercise was followed by the ranking of the fifteen qualities. In formulating the directions care was taken to keep the respondent's mind on behavior, as contrasted with traits.

Preliminary use of the scale seems to indicate that the scale can be scored with some degree of objectivity; that the scale is discriminating in that it presents a wide range of scores and marked individual differences among teachers; that there also appear to be definite patterns of response.

Whether the scores have any practical value remains to be determined by further research.

NOTES

1. A. S. Barr, "The Measurement and Prediction of Teaching Efficiency, A Summary of Investigations," *Journal of Experimental Education,* XVI (June, 1948), 202–83.

2. Copies of the scale can be had from A. S. Barr, professor of education, University of Wisconsin, Madison, Wisconsin.

JOHN CURTIS GOWAN

San Fernando Valley State College

Self-report Tests in the Prediction of Teaching Effectiveness

If we assume that teacher effectiveness is observable and measurable and related to the behavior of the teacher, two procedures for measurement suggest themselves. First is the method of ratings and observations by third parties, a procedure that has the advantage of close relationship to behavior, but the disadvantage of second-hand report. Second is the device of self-report personality testing, which has the advantage of immediate report, but the disadvantage of showing less relationship to behavior, since self-concept and behavior may be at variance. What are the possibilities and limitations of the self-report method? How has it been used? How might it be used?

In all research in teacher effectiveness, the basic problem of the researcher is: Whose criterion of teaching effectiveness shall we take? Since this question has been thoroughly discussed elsewhere (1, 13, 34, 35, 40) it will not be considered here. But other problems centering on the instruments used to predict teacher effectiveness remain to plague researchers, several of whom have run into negative selection factors (2, 22). In these studies, candidates who dropped out of teacher training and teachers who left the profession appeared to have more desirable characteristics than those who remained. The problem of differential attrition rates needs further attention.

Difficulties in the validation of instruments designed to predict teacher effectiveness are so serious as to force testers to consider the possibilities of tests based on face validity. In this approach experts

JOHN CURTIS GOWAN is a professor of education and chairman of the Guidance Area at San Fernando Valley State College, Northridge, California.

study the significant acts a teacher performs, the characteristics facilitating this behavior, and the scales that best assess these personality characteristics. According to MacKinnon, a beginning in this direction has been made by the Institute of Personality Assessment and Research (IPAR) at Berkeley, California (24, 25).

The question of validity, reliability, and resistance to fakability in self-report tests is a source of much concern. It is no easy task to set up criterion groups to determine predictive validity, for it is obvious that neither persistence in student teaching nor long tenure as a teacher can be trusted to discriminate between effective and ineffective teachers. As a result, two alternatives are open. The first is more reliance on construct and face validity, in which the expert trusts his own specifications of teacher competence. The second lies in the discovery of more specific criteria, such as pupil gain, and the tying of validity studies to restricted rather than global areas.

The reliability of tests and scales involved in teacher prediction has not been properly scrutinized. The difference between general reliability measures using heterogeneous groups and local coefficients using more homogeneous college populations is sometimes surprising and disappointing. Few studies have the rigor of the Michaelis inquiry, which rejected all scales with local reliability coefficients below .8 (28). Even at this level a considerable amount of error variance is introduced in individual prediction. Before tests are used to predict teacher effectiveness, careful studies of reliability under local conditions should be made.

Reliability and validity are two requirements of tests designed for screening purposes. Resistance to fakability is a third essential. Differences in self-report disclosures made under the protected conditions of experimental research and under the punitive conditions found in screening constitute a critical issue in the use of any test. While it appears probable that some discrepancy will always exist, it now seems possible to control the size of the variation. One method employing special validating scales that measure faking and test-response set is that found in the Minnesota Multiphasic Personality Inventory (MMPI) and the California Psychological Inventory

(CPI). Another method is the revision of questions to negate the factor of social desirability. Here the forced-choice technique of the Edwards Personal Preference Survey (EPPS) seems superior to the true-false type of question found on the MMPI and the CPI.

It is ironic that most of the research on teacher effectiveness has employed the MMPI, the foremost psychiatric instrument. The problems inherent in using a clinical screening test in normal populations cannot be discussed here, although they are serious. More promising than the use of the clinical scales of the MMPI are the efforts to develop special scales. Three of these plus one validating scale have been suggested for screening purposes. Cook and Medley devised the hostility and pharisaic-virtue scales, both related to the prediction of teacher effectiveness (8). Gowan and Gowan also produced a teacher prognosis scale (16). It is impractical to give an adequate account of these efforts here; the reader is referred to the original studies or to Sheldon's comparison (39).

The K scale, one of the validating scales of the MMPI, has come in for a good deal of comment as an indicator of teacher effectiveness. Originally designed as a "suppressor variable" to correct for defensiveness in test-taking, it has appeared to have unsuspected properties in sampling ego strength. Gowan advocated the K scale as a valid and widely reported indicator of teaching potential (14). Tanner found the K scale to be the only one from a large battery that discriminated between criterion groups of teachers of both sexes (44). Cook and Medley also found a highly significant difference on the K scale between criterion groups of effective and ineffective teachers (8). Levine was dubious concerning this conclusion (22), but no study has presented contrary evidence, and exhaustive Berkeley studies considered only the clinical scales of the MMPI (11, 28, 45).

A useful critique of these four scales plus the Minnesota Teacher Attitude Inventory (MTAI) was made by Sheldon and others (39), who noted coefficients of correlation of .5 or more between the four MMPI scales despite minor item overlap. These researchers concluded that all these scales, including the MTAI, measure a common psychological entity which can be described as "warm, friendly and rap-

port-building." There have been at least two other attempts to construct special teacher-prediction scales on the MMPI (2, 5).

As for the clinical scales of the MMPI, three separate studies at the University of California in Berkeley in which authority-figure ratings were used as a criterion reported generally negative results (11, 28, 45). Two other studies of the MMPI gave somewhat more optimistic reports on the use of clinical scales (30, 44).

A kind of validation of the MMPI scales was afforded by Seagoe's follow-up of 314 teaching candidates disqualified for the teaching credential by the action of the training school screening committee (37). Against a 2 per cent expectancy, over 10 per cent of the disqualified students exceeded *t*-score 70 on the psychopathic deviate, psychasthenia, and schizophrenia scales. Special subgroups classified by symptoms showed much higher incidences on some scales.

Since the MTAI appeared about a decade ago, this instrument has been the object of much research, the consensus being that it truly measures some aspect of the teaching process. In general, high scores on the MTAI appear to be associated with warm, intelligent, permissive, non-authoritarian classroom behavior on the part of teachers (7, 9, 39). Scores also relate to some extent to administrators' ratings (9, 43). Scores increase with educational and professional training (20). The chief variance seems to fall on intelligence and anti-authoritarianism (12). One of the chief difficulties with the MTAI is its ease of fakability, a factor that seriously limits the usefulness of the instrument in screening (29, 32, 41). Another problem that cuts down the efficiency of this instrument is that high scores are made by going to the extremes on the Likert-type choice continuum (from "strongly agree" to "strongly disagree"), and some excellent teachers appear to be conditioned to hedging their answers.

The CPI, a new instrument built out of the MMPI by Gough, is the object of much recent and ongoing research. Initial reports of two ongoing studies (19, 22) have turned up negative indicators on some CPI scales against the criteria of supervisor's ratings and continuance in the student-teaching program. Hill found some positive scale discrimination, however (18). Dicken discussed simulation (10).

Other current inventories on which research is becoming available include the EPPS (42) and the Guilford-Zimmerman Temperament Survey (15, 38). Older inventories include the Bernreuter, the Heston Personal Adjustment Inventory, the Bell Adjustment Inventory, the Minnesota Personality Scale, the Minnesota T–S–E Inventory, the Allport-Vernon-Lindzey Study of Values, to name a few.

As for interest inventories there is little reason to doubt claims in the manuals that the social service scale of the Kuder Preference Record or the various teacher scales of the Strong Vocational Interest Blank measure some interest in teaching, though the exact variance sampled is another problem. The tests developed by Ryans in connection with the Teacher Characteristics Study (34, 36) should also be mentioned. The final report of this research yields many valuable clues for those who aspire to measure teacher effectiveness by personality devices (34). The Rorschach, the Thematic Apperception Test, and other projective devices have been explored but without clearly significant results.

In criticism of the limitations and the procedures in the use of self-report instruments, it may be said that:

1. Research has failed to define, limit, or clarify the criteria sufficiently. Most studies employ criteria of authority-figure rating without attempting to determine reliability of the relation to pupil gain. The usual experience is to find studies sophisticated in analysis of the dependent variables (personality scales), but naïve in analysis of the criterion parameters.

2. Research has failed to understand that effectiveness in teaching is a complex matter, not a global variable, and that different methods may be necessary to measure different aspects.

3. Research has failed to check the local reliability of tests and to do enough cross-validations of results in constructing scales.

4. In most studies, research has failed to control the variables of sex, age, status, and teaching level; the consequent dumping of cases together has obscured results. The factors that produce an effective male high-school mathematics teacher may be very different from the factors that produce an effective kindergarten teacher.

5. Research has failed to realize that we must build on items, not on scales. Item analysis, not scale analysis, is the useful procedure. It is necessary also to make items at least as sophisticated as those who will take the test, and this injunction points to the adoption of the forced-choice response that controls social desirability factors. The building of special scales along these lines is to be encouraged. One such attempt is available from the writer upon request.

6. Finally, research has failed to understand the difference between the factors that affect choice of a vocational field and the factors that affect success in that field. In teaching, the problem of negative selection needs much more study.

Turning from a review of past research to speculation on future progress, let us suppose that we wished to determine why a baseball team wins (or loses) games or why a business firm makes (or loses) money. While some personality testing of the staff might be in order, many other kinds of assessments would also be necessary. Testing in general and personality testing in particular would constitute an interesting but restricted part of the total methods of investigation. A similar situation may well exist in teacher prediction.

It will therefore be constructive, first, to identify those aspects of teaching that are most amenable to personality testing and to use tests in this area only. We must abandon the concept of a global quality of teacher effectiveness and recognize that many distinct and independent factors are involved.

A start can be made in the direction of clarity and specificity by pointing out the importance of a discovery first made by Hellsfritsch (17), although most clearly enunciated by Medley and Mitzel (27). These writers state that there are several independent factors in the complex known as *teacher effectiveness.*

The first factor, the usual criterion, is rating by others, generally by supervisors. Whatever this factor may measure—and social nearness to the rater is one guess—it appears to be generally unrelated to pupil gain and is not well measured by tests now available. It is easily assessable, however, through sociometric devices such as peer-group ratings or adjective check lists.

The second factor, an extremely important one, though used as a criterion in few studies, is personal effectiveness in promoting pupil gain. The independence of this factor from the first one has been noted not only by the authors just mentioned but also by Brookover (4), LaDuke (21), and Morsh (31). Much confusion in research arises from ignoring this independence and trying to validate either pupil gain or personality-test results against a field rating criterion.

Although personal effectiveness in promoting pupil gain can be measured by several test scales, such as the K scale of the MMPI, this fact is not often recorded. The reason is that most studies use authority-figure rating as a criterion, instead of employing an index of pupil gain inclusive enough to embrace attitudes as well as habits and skills. This second factor is akin to teacher emotional health and objective self-rating as noted by McCall (23), whose study was one of the few to use pupil gain as a criterion. Results similar to those of McCall were obtained by Medley and Mitzel in their "effectiveness of stimulation" (27). Other attempts to describe the same psychological entity include Cogan's "inclusive teacher" (6), Sheldon's "warm teacher scales" (39), and Rotsker's "social attitudes and mental health" (33).

It is probable that this second factor involves at least three subfactors. These have been most usefully categorized by Ryans as behavioral modes (34, 36). The first is "responsible behavior." A teacher who exhibits "responsible behavior" may be described as conscientious, methodical, initiating, energetic, task-oriented, organized, and effective in controls and timing. This is essentially the "B-type" or self-controlling teacher of the Brooklyn College studies, as reported by Washburne (46). The CPI test scales, such as responsibility and dominance, should be well adapted to measure this aspect. The criterion of pupil gain here might well be the quantity of work done under conventional methods of achievement.

The second subfactor is "democratic behavior." Well described by Cook and others in setting up the MTAI (7), teachers who exhibit "democratic behavior" see good in themselves and others and are acceptant of themselves and others as a result. Such teachers are non-

punitive, anti-authoritarian, trusting, tolerant, and permissive. This factor may be measured by the MTAI or by the personal-relations scale of the Guilford-Zimmerman Temperament Survey. The criterion of pupil gain here might well be measured in terms of attitudes, including self-understanding and self-acceptance, and their life transfer values in responsible civic behavior.

The third subfactor is "stimulating behavior." The stimulating teacher has been described by Maslow and Zimmerman (26) and by Brandwein (3). He is creative, intraceptive, original, inspiring, and able to "commit" students to a lasting interest in his subject. No present tests measure this factor, but the criterion of pupil gain should be in terms of development in creative thinking, originality, problem-solving ability, and degree of commitment to some intellectual pursuit.

Turning from theoretical constructs to practical realities, let us consider the kind of screening program that can be built, given the efficiency of present tests. The most important thing here is to start with a selection program and do research and keep tab of results so that when instruments or procedures prove useful locally they can be incorporated into the program. Testing may undertake to provide information on:

General developed ability (SCAT)
Psychiatric clearance (MMPI)
Communication skills (STEP)
Vocational choice (Kuder, Strong)
Authortarian clearance (MTAI)
Ability to get along in group (sociometric measure)
Specific skill competency (specific skill test)

If tests were considered the source of restricted information on the aspects of student competency just noted, they might be usefully employed by selection committees of training institutions as screening devices. The student whose score fell below a certain cut line would be referred by the committee to a remedial-skills laboratory. While failure to meet the critical score on any test would not constitute grounds for rejection, failures on several tests, by establishing a pattern of inferior performance, might result in rejection or vocational

counseling for another work area. Candidates who had problems in relations with others might find group therapy or special assignments in working with children helpful, or they might proceed at a slower pace through the professional program. All such cases would be in the hands of the committee, and the ultimate failure would not be failure on the tests, but failure to co-operate with the committee. In this way, testing would serve its real function of being the handmaiden not the master of the selection committee.

Reliable, relevant, and specific information is always valuable in decision-making, but it is no substitute for the judgment necessary to make the decision. Tests can be as useful to educators as traffic lights are to automobile drivers, but neither tests nor signals can substitute for the thoughtful judgment of an experienced individual. For just as the efficacy of traffic devices increases with the skill of the motoring public, so the value of testing increases with the advancing ability, insight, and experience of educators.

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CARLETON WASHBURNE
LOUIS M. HEIL
Brooklyn College

What Characteristics of Teachers Affect Children's Growth?

What measurable characteristics of a teacher have a measurable effect on the intellectual, social, and emotional growth of her pupils? Past research on this crucial question has generally yielded inconclusive results. Yet without a definitive answer we have no way of determining the value of our programs of teacher education or of directing them toward a clearly seen goal. Nor can we use anything other than subjective judgment in selecting candidates for teacher training or teachers for our schools.

After eight years of research, the last two of them subsidized by the U.S. Office of Education, the Office of Testing and Research of Brooklyn College has data indicating that at least part of the answer to this question has been found. A two-hundred page report on the findings to date is available (1).

Only some of the high points of the research can be covered here —the hypothesis underlying the study, the general design of the research, the nature of the instrumentation, some of the most striking conclusions, and suggestions on future studies.

Our hypothesis is that teachers who deal with children all day long throughout the year have a definite and determinable influence on the intellectual, social, and emotional growth of children and that this influence is conditioned by both the type of teacher and the

CARLETON WASHBURNE is director of the Division of Graduate Studies and the Teacher Education Program at Brooklyn College. LOUIS M. HEIL is director of the Office of Testing and Research at Brooklyn College.

kind of children with whom she is dealing. If we can categorize children and if we can distinguish among types of teachers, we should be able to determine what kinds of teachers have what kinds of effects on what kinds of children.

Our plan involved the study of children in nine public schools of Brooklyn. Three of the schools were in lower socioeconomic areas, three in upper socioeconomic areas, and three in intermediate areas. In each school the principal was asked to select two teachers in Grade 4, two in Grade 5, and two in Grade 6. Three of these teachers were to be, in his judgment, "pretty good," and three, "not so good," but the principal was not to identify which teachers came under which heading. These fifty-four teachers, plus an additional teacher, and their pupils were the subjects of the study.

We selected Grades 4, 5, and 6 because these are the last grades in which children are exposed to one teacher throughout the day and the year, yet the children in these grades have enough skill in reading and writing to be easily tested. Our hope was that one or more of the instruments selected or devised would indicate a clear-cut relation between certain measurable characteristics of the teachers and the progress made by children of various groups in academic, social, or emotional development during the year.

One major problem was threefold: to find, or construct, evaluative instruments that would measure certain aspects of the intellectual, social, and emotional growth of the children during one school year under the same teacher; to find ways of differentiating the children in different categories; and to find ways of identifying different types of teachers.

All children were given the Stanford Achievement Test early in the year and another form of the test near the end of the year. All children were also given the Ohio Social Acceptance Scale at the beginning and at the end of the year. This instrument, which might be called a measure of children's friendliness, is a sociometric test that shows the number of children in the class toward whom each child feels various degrees of friendliness and the number of chil-

dren in the class who feel various degrees of friendliness toward him.

Toward the end of the school year all the children were given the Otis Group Intelligence Test, Form AS, and another instrument called "Assessing Children's Feelings." The latter instrument, devised at Brooklyn College and carefully validated during the six-year period before the experiment began, consists of a series of tape-recorded dramatic episodes, involving various relationships and drawing forth projective responses from the children in a form that can be machine scored.

On the basis of their responses to the children's feelings test the children were categorized. Each of the categories into which the children were placed has been analyzed in detail, and the description of the clusters of traits exhibited by each has been given in the full report. Here we shall refer to them in brief terms that we have found convenient: Conformers, Opposers, Waverers, Strivers.

All teachers were rated on the Teacher Observation Scale prepared at Brooklyn College. Five faculty members of the Department of Education at Brooklyn College who were accustomed to the observation of student teaching were given preliminary training in the use of the scale and, in preliminary trials working in teams, had obtained a high degree of reliability in their ratings. Individually, these observers visited each teacher six to eight times during the year and rated her behavior in the classroom on the Teacher Observation Scale.

This scale owes the idea of polar categories, for example, Democratic-Autocratic—and many of the headings to Ryans (2) and much of the material describing teacher behavior to the Cooperative Research Project (3). The teachers were rated on each of seventeen categories, described operationally in a manual, on a six-point scale.

The other three measures of most of the teachers were obtained toward the end of the year in a four-hour testing period (May, 1959). In this testing period the teachers took the Teacher Education Examination (Educational Testing Service, Princeton), the Manifold Interest Schedule, and a special role-playing type of test not reported here. Since the Manifold Interest Schedule yielded the most clear-cut results, it merits description.

The Manifold Interest Schedule consists of 420 activity statements. The teacher (or other subject) is asked to make one of three responses to each item: "Like," "Dislike," or "Indifferent." A few of the items follow:

Throwing whatever is handy when I'm angry.

Going to a dance.

Attending parties where I meet new people.

Writing a petition and collecting signatures.

Making up a play with a little group of friends.

Having people feel definite about me, either liking or disliking me.

The statements of the Manifold Interest Schedule fall under thirty categories—twelve academic and eighteen personality—with fourteen statements for each category.

The responses to the Manifold Interest Schedule are scored, category by category, by subtracting the number of dislikes from the number of likes. The thirty resulting category scores are then adjusted upward or downward depending on the extent of the subject's over-all tendency to be a "liker" or a "disliker." A statistical analysis of subject's profile of the eighteen personality categories has resulted in six recurring patterns or clusters. The teachers in our experiment tend to fall in three of these patterns, which are called "the turbulent person," "the self-controlling person," and "the fearful person." Detailed descriptions of each of these three kinds of persons are presented in the report (1).

On the negative side, we found no significant relation between teachers' scores on the Teacher Education Examination and any kind of growth on the part of their pupils. Does this mean that the teacher's knowledge of child psychology or professional education as measured by the test has no significance in her teaching? That the test is completely invalid? No such sweeping generalization is justified. All the teachers in the experiment had had the standard amount of professional training; all had been repeatedly examined on their professional knowledge before being graduated from college and cer-

tificated. All had passed the license examination to teach in the city. It is quite possible that had we included in our experiment a sizable number of teachers who had had no professional training, the Teacher Education Examination might have shown a difference between the progress of their pupils and the progress of pupils taught by trained teachers.

Our experiment does show that whatever effects the teacher's knowledge measured in the Teacher Education Examination might have are completely masked by the effects of the teacher's personality.

A second negative result was found in responses to the Teacher Observation Scale. The teachers' observed behavior, as identified in the scale and as reported by the observers, bore no general and significant relation to the children's progress. Does this mean that the teacher's behavior had nothing to do with the children's progress? Or that it is impossible to recognize a good teacher when you watch her at work?

Not at all. The same selectivity regarding the subjects referred to in connection with the results from the Teacher Education Examination applies to the Teacher Observation Scale. These teachers' classroom behavior had been such that they had passed their practice teaching while in college and had also passed their probationary years out in the schools. Students or teachers with outlandishly undesirable behavior would not, as a general rule, be teaching and hence taking part in the experiment.

But there is a more basic question. Is it not likely that in preparing the Teacher Observation Scale we had preconceived ideas of what constituted effective teaching and had prepared the scale in terms of these ideas? Is it not likely that the observers themselves, while consistent, also had presumptions of what kind of behavior was desirable from the standpoint of its effects on the children and that these presumptions contained fallacies? Perhaps in the light of our positive findings a new type of Teacher Observation Scale can be devised that will show a relationship between observed teacher behavior and children's progress.

Parenthetically, there is a positive correlation, in the order of .50,

between the ratings on the Teacher Education Examination and those on the Teacher Observation Scale. Maybe the makers of the Teacher Education Examination also had preconceived ideas that were fallacious, and a new examination could be devised on sounder hypotheses.

The one striking positive result of the experiment has been clear evidence that the teacher's personality has a clear and measurable effect on the progress of her pupils academically and socially—academically in terms of progress on the Stanford Achievement Test, socially in terms of growth in friendliness and recipiency of friendliness as measured on the Ohio Social Acceptance Scale. There appears also to be a relationship between the type of teacher and her children's emotional adjustment as shown on the children's feelings test.

The results verified the major hypothesis of the study—that different kinds of teachers get varying amounts of achievement from different kinds of children. The self-controlling teacher got the most achievement from the several different kinds of children; the fearful teacher got the least achievement. The turbulent teacher got almost as much achievement as the self-controlling teacher from children classified as conformers and strivers but less than half as much achievement from children classified as opposers and waverers. Although the fearful teacher got the greatest achievement with strivers, the amount of such achievement did not differ appreciably from that obtained by the self-controlling teacher and the turbulent teacher.

In terms of growth in friendliness, the fearful teacher actually got more gain than either the turbulent teacher or the self-controlling teacher from children categorized as waverers.

Another interesting fact emerged when we analyzed the various parts of growth on the Stanford Achievement Test. By testing thousands of Brooklyn College Freshmen on the Manifold Interest Scale and watching their choice of subjects and their marks, we found that the turbulent student had a strong inclination toward science and mathematics and away from verbal subjects and tended to make good marks in science and mathematics. This inclination also appeared to exist with the teachers in our study and to have an effect on the kinds of gain in achievement demonstrated by the children. In our study

we found that the turbulent teacher, who got less total achievement from children than the self-controlling teacher, got markedly more achievement from the children in science and arithmetic.

Brooklyn College students classified as fearful tend to do well in the social sciences. Fearful teachers, although at the bottom of the heap generally in terms of children's progress, are at the top for three of the four categories of children in academic progress in the social studies. The one exception is the wavering category of children from whom self-controlling teachers achieve somewhat better progress, .747 of a grade level against .704 for the fearful teacher.

One other point must be recognized. While the self-controlling teacher is definitely superior to either of the other two types in obtaining academic achievement and social acceptance, children under this type of teacher appear to be less free in the expression of their feelings and less self-reliant. They tend to be more prone to disclaim responsibility and put it back into the hands of the authority figure.

Space does not permit a full description of the three types of teachers. The terms, *turbulent, self-controlling,* and *fearful* are so inadequate that we must give a more detailed picture of each type.

The turbulent teacher appears to place little emphasis on structure and order. Thinking, conjecturing, and objectivity appear to be her center of focus. She tends to move away from people and toward ideas. She accepts and expresses her impulses. She is much more effective with conforming and striving children than with opposing and wavering children. She is more effective with those who already have an inner security and order than with those who do not. It is possible that she might be more effective with adolescents than with young children. This hypothesis needs exploration.

The self-controlling teacher focuses on structure, order, and planning and is work inclined. She is definitely empathetic and warm in her feeling toward her pupils. Her pupils show less anxiety than those of the other two types of teacher. She has strong leadership tendencies but tends to show acquiescence toward immediate superiors. She is notably sensitive to the feelings of others.

The fearful teacher is anxious, variable in her behavior. She seems

unable to inject structure and order into the teaching atmosphere. She tends to induce anxiety in her pupils and to arouse defensive reactions in them. Her thinking appears to be constricted in the face of uncertainty. She has a severe conscience. In relations with others she tends to be self-protective, cautious about committing herself. She likes to have rules to guide her action and wants others as well as herself to abide by rules.

Like all pioneering studies, this one needs to be repeated by other researchers working under similar and under varying conditions. It certainly should be tried in different environments. Our data are all derived from schools in a highly urban community. The current study should be regarded as one that points the way to highly fruitful research rather than as one that gives a final answer to our basic question on the measurable characteristics of the teacher that relate directly to the development of her pupils.

As to the next step we propose to take at Brooklyn College: We have set up an interdepartmental committee consisting of two members of the psychology department, one sociologist, a clinical psychologist from our educational clinic, a psychologically oriented professor of education who has been a classroom teacher and knows the schools, and, as chairman, the director of testing and research.

This committee has been given released time to explore the type of experiences that may lead to the development in undergraduate students of the insights and the personality characteristics most effective in dealing with various categories of children. Can a turbulent-type person, as late as the college years, recognize his or her limitations in structuring and limit-setting and learn to do something about them? Can he or she learn to deal differentially with the various categories of children? Can a self-controlling type develop the capacity to give more self-reliance and power of independent thought to children without loss of the structuring that yields many positive results? Can a college give to the fearful type the sort of security that will at least mitigate the fearfulness and anxiety, or must such persons be guided out of teaching?

Can we make the educational experiences of the students such

that they see directly how different types of pupils' personalities can be appropriately dealt with, through being taught differentially according to their own different personality types?

It is with such questions that our committee will wrestle. When they feel that they have devised a suitable set of experiences to yield some sort of answer to these questions, two or three sections of undergraduate students will be freed of our present prepractice-teaching professional requirements and will be trained according to the tentative plan, under carefully selected staff members. The training of such prospective teachers may occur in special sections in departments other than education as well as in the education department. Such students will be carefully pre-tested and post-tested, and later will be followed up in the schools. We do not propose to modify, at least at present, the practice-teaching and the methods course, which usually occupies the senior year, although there may well be some changes even in the methods–practice-teaching course for the experimental group of students.

It is, however, much too early to tell what kind of changes will be made in the program of these students. It should be a radical change, oriented not to the acquisition of knowledge, although the students will certainly be acquiring pertinent knowledge, but rather toward changes in basic attitudes and insights. It may be necessary to ignore license requirements (we believe the city and the state will permit this) and preconceived notions as to what sort of training, what courses, would-be teachers should have. We shall search for a means of developing in the various types of students those characteristics that the present experiment indicates are most likely to contribute effectively to children's intellectual, social, and emotional growth.

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FRED T. TYLER
University of California

Teachers Personalities and Teaching Competencies

Successful teachers are little less than paragons if one is to judge from recent discussions and from reports of empirical observations and experimental research dealing with teachers' personalities. One writer lists nineteen desirable qualities, including integrity, maturity, dominance, and diligence. Another investigator catalogues twenty-nine attributes, such as introversion, vitality, punctuality, and persistence. A third researcher tabulates only six traits, but among them is competence in computing with two-digit numbers. A fourth author reports that "speed of tapping" and "right and left hand coordination" (supposedly measures of temperament) distinguish effective from non-effective teachers. Another writer thinks that intelligence is important but maintains that we cannot prove that fact. Effective teachers, one states, are peppy and popular, with pleasing voices. One other example: a teacher should have magnetism, self-control, and enthusiasm. A complete listing would contain a finite number of attributes, but the number seems to be approaching infinity as a limit.

Just how accurately do such attributes differentiate between competent and less competent teachers? Correlational analyses, analyses of variance and covariance, and item analyses are among the statistical techniques commonly used in studies designed to determine the qualities of successful teachers. Some research workers report significant coefficients of correlation, but the numerical values of the coefficients are highly variable, from large and negative through zero to large and positive. Many other writers have arrived at coefficients of correlation that are not significant at all statistically. Moreover,

FRED T. TYLER is a professor of education at the University of California at Berkeley.

the results of tests of significance are exceedingly variable. Critical ratios, t ratios, and F ratios range from not significant to significant at high levels of confidence. Rarely have studies been replicated; and, to make matters worse, rarely have investigators used their formulas to select teachers or to predict the success of individuals. The researchers have been content simply to manipulate data for teachers already employed. Yet a statistically significant coefficient of correlation or t ratio may or may not lead to educationally significant selection and prediction. About these problems we know next to nothing, for researchers fail to put their results to crucial tests.

How many mistakes in judgment and prediction would we make if we relied on "significant" correlation coefficients of .20, .40, .60, or even .80, or on differences that are significant at the .10, .01, or .001 level? Errors could be large and numerous. Does this matter? The answer depends on our attitude toward the individual and toward society. Are we willing to reject individuals who might be developed into successful teachers despite poor prognoses? Is society prepared to lose them? Are we ready to retain teachers who may prove to be incompetent despite favorable prognoses? Can society afford to prepare them to be teachers? Individuals and society alike have a stake in decisions based on evidence that has statistical significance; consequently, the practical utility of our statistical evidence must be determined. Someone must accept the responsibility for assessing the educational worth of significant statistics. Physicists make experimental tests of their predictions; why should educational psychologists not do so as well?

Not infrequently investigators are enthusiastic about their "significant" results. In one case, ρ (for six teachers) was reported to be $.93 \pm .35$, with the recommendation that the observed trend merited further investigation. In another study, on the basis of correlation coefficients of the order of .40, the writer concluded that certain traits may be used to distinguish between good and poor teachers. In a third instance, the writers stated (from coefficients of correlation under .30) that their methods seemed to hold possibilities. Is even

such limited optimism justified—especially if we are interested in individuals rather than merely in groups? The reader must propose his own answer.

Regardless of how we feel about the observed relationships between teaching competence and personality, we may still ask why results are not more positive than those typically reported. Some tentative answers will be proposed in this discussion of three main issues: current criteria of competence in teaching, modern predictors of personality, recent designs in analysis of data.

To catalogue the attributes of competent teachers we need to know which teachers are successful. Here we deal with questions about the criteria of teaching effectiveness. Two general types of criteria are in common use. According to one, effective teachers are those who produce the greatest growth in their pupils. According to the other, effective teachers are those who are assigned the highest ratings by pupils, teachers, principals, or supervisors.

If we use pupil growth as the test of a teacher's effectiveness, with what type of growth shall we be concerned, cognitive or affective? Some say a marked increase in scores on achievement tests is evidence of effective instruction. Others argue that a teacher's competence should be assessed in terms of non-cognitive or affective growth. That is, they consider a teacher to be successful if his pupils show appropriate and adequate changes in social behavior; in mental health; in attitudes, values, and beliefs; in life adjustment; and these are not assessed by standardized achievement tests. There are many suitable instruments for detecting improvement in school achievement, but techniques for the evaluation of non-cognitive functions are much less satisfactory. Indeed, evidence about growth in affective behavior is difficult to come by.

It is sometimes urged that there are certain inherent weaknesses in academic achievement as the criterion of a teacher's effectiveness. A teacher may produce superior performance in mathematics to the detriment of his pupils' mental health. Should the teacher be considered successful if undue anxiety, excessive worry, aggression, and

frustration are concomitants of competence in algebra? Again, students may become very competent in geometry, but at the expense of progress in other parts of the curriculum. To justify the demands of the geometry teacher, students may neglect to meet even minimum expectations of other teachers who are less threateningly demanding.

Just how appropriate is pupil growth as the index of a teacher's effectiveness? What growth do we wish to measure? How is it to be assessed? Is extensive growth always desirable? Reliance on pupil growth as the criterion is fraught with difficulties at the least and with dangers at the worst. Accurate prediction will not be easy as long as we do not agree on the criterion of success.

As we pointed out earlier, a teacher's success is often evaluated by means of rating scales on which pupils, principals, or supervisors assign some numerical value to general effectiveness or to each of a number of specific items dealing with the teacher's activities and behavior in the classroom.

Now it is generally conceded that the judgments of different raters are not in close agreement. Pupils and supervisors often disagree. The ratings made by supervisors are not necessarily the same as the ratings made by a teacher's colleagues. Again, the coefficients of correlation between ratings and measures of pupil growth are often low. Which teachers are classified as successful depends, among other things, on the criterion and on who applies the criterion.

That the definition of an effective teacher varies with the evaluator is well illustrated in a study by Moulton (*School Review*, Winter, 1957). According to his evidence, inner-directed raters believe that the competent teacher knows his subject matter and how to present it; he is demanding of himself and of others; he believes that signs of affection are indices of weakness. In contrast, other-directed individuals assert that the successful teacher loves children, is firm because children want firmness, is committed to finding good in others, and is alert to the needs of pupils. That is, inner-directed and other-directed judges do not agree on what constitutes effective teaching. We vary greatly among ourselves in our values and atti-

tudes, and these affect our judgments about teachers. It is no wonder that the identification of competent teachers depends on who attempts to identify them and by what means.

Also, a teacher may be effective with some pupils but not with others. Difficulties may develop between inner-directed teachers and other-directed pupils. The conflict may be so serious as to interfere with successful teaching and learning. According to Webster (*Journal of Social Issues,* 1956) there are certain personality differences between Vassar girls who major in social science and those who major in physical science, the former appearing to be less rigid and authoritarian than the latter. The authoritarian teacher may find it difficult to provide the most appropriate type of instruction for pupils who are quite non-authoritarian. Some pupils prefer a highly organized, systematic presentation of instructional materials. Others delight in, and learn from, the give and take provided by informal teaching procedures. Few teachers are able to appeal effectively to all pupils, and pupils are likely to vary in their acceptance of a given teacher. It is entirely possible that the nature of the social interaction in a class affects the ease with which new concepts, principles, attitudes, and values are learned, although more research on this issue is needed.

Who is the effective teacher? Who wants to know? Who is to identify him? Competence is no unidimensional concept. We shall need to consider various types of competence rather than competence in general. We must expect that it will be difficult to identify successful teachers, for teaching is a highly complex activity.

Because, traditionally at least, the learning-teaching situation involves learners and teachers in a social setting, we must expect that the personality traits of pupils and instructors will somehow influence the effectiveness of instruction and the efficacy of learning. And this should be so, regardless of our criterion of teaching competence. Let us next consider certain issues associated with the measurement of personality traits.

Personality traits are assessed by a great variety of devices—objective tests, inventories, behavior ratings, projective techniques,

among others. For instance, "rate of tapping" is included as an objective test in a battery intended to evaluate "temperament." The Minnesota Multiphasic Personality Inventory (MMPI) samples several dimensions of personality by means of items that require a simple "yes" or "no" response. The Minnesota Teacher Attitude Inventory (MTAI) is a similar kind of instrument. Projective techniques, such as the Rorschach, the Thematic Apperception Test, the Picture Frustration test, and the sentence-completion test have been given some attention in recent studies.

As a general rule, the end result of the measurement is a number attached to a trait name, as, for instance, a percentile score of 81 on Sociability or a *T* score of 60 on Masculinity-Femininity (MF). How are such scores obtained, and what do they denote?

Percentiles or standard scores are transformations from raw scores obtained by summing the items for which the responses agree with a scoring key. The raw scores are changed by referring to a table of norms. These transformed scores are essentially position-indicating indices. That is, for instance, a percentile tells us the position of a given raw score in a distribution of raw scores obtained from a standardization, or normative, group. Thus, if a man's raw score on the Morale scale of the Minnesota Personality Scale is 155, he has a percentile score of 50 according to the norms based on the responses of first-year students at the University of Minnesota before World War II. It should be apparent, then, that percentiles do not indicate how much of a trait a person has; rather, they indicate the relative size of a raw score in comparison with the raw scores of some specific normative group. Similarly, we do not know precisely what amount of dominance is implied by a *T* score of 79. If this interpretation of percentiles is correct, we need to be cautious in our statements about the nature of teachers' traits when we know only their scores on personality tests. We may also ask whether the norms developed for a certain time and place have the same significance for another time, another place, and another group.

The manual for the MMPI provides norms for interpreting scores on the MF scale. Thus, a raw score of 21 corresponds to a *T* score of

50, average for the group of sixty-three engineers and fifty-four noncommissioned officers that comprised the normative group. The mean *T* score for fifty-seven men in a practice-teaching course was found to be 60.9 (1). May we conclude that these prospective male teachers are characterized by the term *effeminate*? Possibly, but probably not. It would be more precise to say that their mean score was greater than the mean score of the standardization group. This statement is quite different from the inference that they have feminine interests.

There is a recognized, accepted, objective standard by which linear dimensions may be determined. Hence, we are able to come to close agreement on the height of an individual. Also we have a rather clear idea about a teacher's height if we know that he is five feet eleven inches tall. But we do not have a very precise notion about his MF trait when we are told that his *T* score on the MF scale of the MMPI is 58. Furthermore, there are several other tests, each purporting to measure masculinity-femininity; and the results from different tests are not always in agreement. The coefficients of correlation between MF scores from various tests tend to be positive but far from unity. According to one investigator, intercorrelations for three MF tests ranged from .20 to .22 for women and .28 to .51 for men. In another study, the reported correlations among four MF tests fluctuated between .41 and .73. That is, one's measured MF may vary, and vary considerably, from one test to another. We obviously need to exercise caution when we attach behavioral labels to test scores, for the results reported in prediction studies will depend on the test used.

Similar comments apply to other tests and other traits. Thus, measures of rigidity differ from test to test, and the results of factor analysis raise questions about the generality of measures of rigidity.

To summarize, we are not always sure what a given test measures. Different tests may give different results even though they are said to be measuring the same trait. Test scores indicate relative standings, not amounts. Careful judgment must be exercised when we attempt to describe the traits of successful teachers from a knowledge of their test scores alone.

We now raise another kind of question. Are scores authentic, or

may they sometimes be counterfeit? Does Buttercup's couplet carry any warning to test users?

> Things are seldom what they seem,
> Skim milk masquerades as cream.

And Psychasthenia (Pt) 33 is Pt 67 incognito; Psychopathic Deviate (Pd) 68 appears as Pd 35; Schizophrenia (Sc) 65 blossoms into Sc 38. (Or, if you dare, feelings of inadequacy are feelings of security in disguise, egotism is revealed as diffidence; bashfulness is displayed as boldness—if not brazenness.)

The pairs of scores just cited were obtained by a subject on two administrations of the MMPI (1). On the first occasion she and other students in a class in educational psychology were asked to respond to the items of the MMPI as insightfully and honestly as possible so that they might compare their measured personality with their personalities as they themselves perceived them. Two weeks later the same students were requested to answer the items as they would if they knew that the test was part of a selection battery used by a superintendent of a school system in which they were very anxious to teach. Some students changed their scores on certain section of the inventory, some on others. Some made extensive changes, and some made few: they had, or thought they had, the traits that would be approved by the superintendent. Profiles of mean scores showed variations for some scales but not for others. Statistically significant decreases were found on five scales: hypochondriasis, depression, psychopathic deviate, psychasthenia, and schizophrenia.

The clinical significance of the changes may be open to some question since the mean profiles from both administrations were within normal limits. According to a clinical interpretation, the "ideal" woman teacher, as judged by the responses of these students, is well adjusted and socially oriented, conforming (even overconforming, if that is possible), conventional, conscientious, free from ordinary human frailties, and a self-starting human dynamo. Even if the two profiles should be given similar interpretations, statistical analyses could still lead to different conclusions. It is worth noting that differ-

ences in mean scores give no evidence about what changes occurred or how individuals modified their scores.

Some students suggested that we might find many changed responses on items dealing with sex and religion. There were some changes, though not so many as had been expected. On each administration practically all the students answered "true" to the items "My sex life is satisfactory" and "I have never been in trouble because of my sex behavior." But on the first testing twenty-seven of the forty women answered "true" to the item "I like to flirt"; on the second testing only three responded "true." On the first administration twelve said they went to church almost every week; on the second administration thirty-seven so reported. Similarly, on the first administration twenty-three admitted to a belief in a life hereafter; on the second administration, thirty-four said they held this belief.

It seems clear that personality inventories are open to faking, certainly under conditions (as in the study cited) that give opportunity for faking and probably under almost any conditions. The effect of faking is to disturb statistical analyses even though a clinician might consider many of the faked scores not clinically different from the honest ones.

The currency minted by personality inventories may contain counterfeit coins, more for some tests than for others. Prospective teachers have been able to fake "good" responses on the MTAI. Some students of education, for example, increased their scores in the "good" direction after a semester's work in educational psychology. Why? Possibly because they became aware of what constitutes "good" or "approved" responses rather than because they had developed any "real" change in their attitudes. It has been shown that engineers are able to fake their profiles on the Strong Vocational Interest Blank, and the Edwards Personal Preference Schedule is not immune to attempts at deception. In these circumstances prediction becomes all the more difficult and consequently less assured.

Are personality traits inherited or developed at an early age or subject to change? This is an important question. To say that teachers are characterized by certain personality traits is to assume the existence

of a basic, stable personality and to assume that the personality traits of a beginning teacher are what they will be after twenty or thirty years of teaching experience. Constancy is necessary if we are to predict the degree of success to be expected, as E. Lowell Kelly pointed out in connection with his study of the predictability of success for clinical psychologists (*American Psychologist*, November, 1955). But can we use the traits of established teachers as a guide to what any person should be like when he begins his career? Are his traits as a student teacher what they will be in twenty years' time?

Of course, many psychologists accept the theory of the early establishment and the long-term stability of personality traits. That is, they believe in the genetic determinism of personality as contrasted with the notion that personality is likely to be changed and modified in the light of the individual's experiences. According to the first theory, enduring, basic traits are established before the child enters school, and from then on there is simply a further unfolding of what was established in the preschool years.

In his presidential address to the American Psychological Association, E. Lowell Kelly noted: "Perhaps because of the need to believe in consistency of one's self from moment to moment and from year to year, we tend to infer an unwarranted degree of consistency in others. Some consistency is indeed necessary for social intercourse, and it is likely that, as a matter of convenience in remembering and dealing with our associates, we utilize stereotypy to a considerable degree and thus tend to infer greater consistency in others than may be the case" (*American Psychologist*, November, 1955).

Thus does Kelly suggest a reason for the widespread acceptance of the concept of the stability of personality. However, some counter evidence is beginning to appear. At the conclusion of his address Kelly said: "Our findings indicate that significant changes in the human personality may continue to occur during the years of adulthood." The basis for his conclusion is found in his longitudinal study of about three hundred engaged couples, a study he started in 1935 and followed up in 1954. An extensive battery of psychological tests was administered at the beginning of the study, many of the same

tests being repeated with a group of 227 couples living as man and wife in 1954. From his analysis of the data Kelly was able to say: "We have found evidence for considerable consistency of several variables, in spite of fallible tools and a time span of nearly twenty years. But we also found evidence for considerable change in all variables measured" (*American Psychologist*, November, 1955).

On the basis of his Vassar study, Sanford wrote: "I have indicated some ways in which personality does change, in positively valued ways, during the college years; and I have suggested some hypotheses concerning the processes and mechanisms by which the student changes, through interaction with the complex environment of the college and the larger community" (2).

Studies of National Merit Scholarship winners reveal modifications in scores on the Allport-Vernon-Lindzey Study of Values during the Sophomore year. Further evidence about stability and variability in these subjects will be available as the data from the four-year study of nearly one thousand academically talented young men and women are analyzed during the coming year (3).

The results of studies on the relationship between criteria of teaching competence and scores on personality tests may have been influenced by the instability of measures of personality. Probably most individuals change in some respects, some more than others. Certain individuals are more susceptible to change, just as some individuals learn a foreign language more easily than others do. The formulation of sound predictive formulas from personality inventories is difficult because personality patterns do change over the years.

We have seen that test scores may vary from test to test even when each purports to measure the same trait. What of the stability of a score from a single test? To describe the personality characteristics of successful teachers, we must have reliable measures of the attributes. If we are to develop a useful prediction formula we need reliable tests, quite apart from any question about what traits the tests are measuring.

It is not easy to obtain evidence about the reliability of personality tests. Two general approaches to the problem are in common use.

First, correlation coefficients are computed between measures obtained from two administrations of the same or equivalent tests to the same subjects. Second, analyses (correlational or otherwise) of the scores from a single administration of a test are used as a basis for drawing inferences about reliability.

Each approach has its weaknesses. In the first approach, memory and practice may influence the results; besides, few personality tests have equivalent forms. In the second approach, we obtain information about the dimensionality of the test rather than about the stability of the scores. A relatively low index of reliability from this method might mean that the test is multidimensional in nature. A high index could imply unidimensionality, but this is no guarantee that on a readministration we would obtain the same results.

In many, if not most, studies the reported reliability of tests leaves much to be desired. Yet high reliability is needed if we are to specify the attributes of superior teachers. Also, we must have stable predictors if we are to have any hope of making accurate predictions of the success a given individual is likely to attain. Actually, many investigators do not refer at all to the reliability of their personality tests. Some may do so on the assumption that the reliabilities reported in the manuals apply to their subjects; but the assumption is shaky.

It will be difficult to predict with a high degree of accuracy the value of an obfuscated criterion from nebulous predictors—especially when the two measures are separated in time by ill-defined environmental influences.

We have seen that accurate prediction is no easy matter, partly because of the nature of the criterion of teaching success and partly because of certain characteristics of the predictive instruments. We now turn our attention to the design of predictive studies and the analysis of the data.

In many investigations the number of subjects is disturbingly small: six, eight, ten, thirteen, nineteen, thirty-two, thirty-five, forty-five, forty-six. Few investigators have had samples of more than a hundred cases. In some studies, relatively complex analyses have been used with small groups, so that one wonders about the stability of the re-

sults and the significance of some of the conclusions. How much confidence can we place in item analyses based on extreme groups of fewer than thirty cases, even as few as thirteen and eight?

In many instances, investigators tell us nothing about the age of the teachers studied. Hence the sample might be quite heterogeneous with respect to a variable that may be important. At least, we do not know that relative age is unimportant. When ages are reported, we sometimes find that the subjects cover a wide age range (thirty to seventy years in one study), and this very heterogeneity may affect the results from any analysis. Physicists are not likely to attempt to predict the behavior of radium by studying a heterogeneous sampling of several kinds of elements. If they should do so, it is improbable that the results would be amenable to successful experimental tests on radium. Does this consideration also apply to the factor of age in describing the personalities of teachers?

It seems entirely reasonable that young teachers may be successful even though their personality patterns are different from those found in their successful but older colleagues. For example, the attractiveness of their youth and their enthusiasm may well compensate for shortages of other qualities regarded as critical. Also, we do not know that test norms based on a group of college Freshmen have the same significance for adult teachers forty-five years of age. Does a percentile score of 60 on Social Introversion-Extraversion mean the same kind of behavior for a fifty-year-old teacher as for a college student? The question again raises the issue about the relationship between a test score and a trait or a trait name.

The mean MF score (MMPI) for eleven men student teachers aged thirty years and over was 53, and for eighty-six men under thirty, 64; for fifteen women student teachers aged twenty-five and older it was 58, and for sixty-seven women teachers aged less than twenty-five, it was 47 (1). The percentile equivalents of the mean scores for thirteen men aged thirty and over on the Confidence and the Sociability scales of the Heston Personal Adjustment Inventory (HPAI) were 54 and 81, while for ninety-one men under thirty years of age the percentile equivalents on the same tests were 64 and 90.

(The differences on the other scales of the HPAI were smaller.) Sanford reported differences between the mean scores of Freshmen and Seniors at Vassar. For instance, the Seniors scored lower than the Freshmen on the Authoritarian scale (2). It is not at all certain that means of personality-test scores will be different for different age groups, but an investigator may well consider the possibility before including in his sample subjects of widely varying ages.

Occasionally, investigators restrict their studies to men or to women teachers, or analyze the data for the two sexes separately. In some instances they fail to tell us the numbers of men and of women in their samples; and often they use the data for both men and women in a single analysis, as if teachers constitute the third sex or the neuter gender, or are asexual.

If we combine into a single distribution the scores for men and women, we may muddy the results of descriptive and predictive studies. The mean MF score (MMPI) for 179 college men and women in a certain class in practice teaching was 56.3; but the separate means were 49.1 for the eighty-two women and 62.3 for the ninety-seven men (1). The sex difference for MF scores—if it is found for other groups of teachers and if it has behavioral implications—should remind us that there may be sex differences on other personality tests. Should we not reassure ourselves on this point before we analyze test scores for men and women teachers combined?

There is another question about personality-test scores that we cannot ignore. Are the behavioral characteristics of a woman with a percentile score of 50 on, say, a Dominance scale, the same as those of a man with the same percentile score, both percentiles having been obtained from appropriate tables of norms? Does "average in dominance" among women imply similar behavior as "average in dominance" among men? Or are we supposed somehow to know what the differences are, if any?

Is "number of years of experience" a factor that may interfere with the formulation of sound predictive formulas or with statements about personality traits of successful teachers? We do not know, but it is

certainly possible that measures of personality traits and traits themselves (if they can be measured) are not independent of the number of years individuals have been teaching. In one study, the number of years of such experience ranged from one to fifty with a median of fourteen. In other investigations, the ranges were from one to twenty and from five to thirty-five. Frequently research reports do not provide this type of information, a fact that does not help us interpret the results.

We need to learn something about this factor of teaching experience and its effect on personality and its measurement. The influence may be negligible, but we should know that this is so before we ignore it. Does a lifetime of teaching (or even one year) leave a teacher's personality pattern unscathed? In one study the coefficient of correlation between test and retest scores on the MTAI was reported to be .43 after an interval of five years. This degree of relationship implies considerable variation from test to retest scores for the same individuals, and the explanation, in part at least, may lie in the factor of teaching experience.

Some investigators report the major fields of academic preparation for the teachers and the student teachers in their studies; others do not. When the information is given, it frequently appears that the subjects represent several different majors, as many as nineteen in one report. Does this difference matter? If we are studying teachers' personalities, we should know that this difference is inconsequential before we decide to analyze scores without regard to field of academic preparation.

The mean *T* score on the MF scale (MMPI) was found to vary from one major to another (1). The mean was 48 for eleven women in art and music, 57 for eleven women in physical education, 68 for seven men in art and music, and 56 for nineteen men in physical education. The percentile equivalent of the mean score on Analytical Thinking (HPAI) for twelve men in physical education was 22; for twelve men in mathematics and science, 63; for eleven women in physical education, 38; and for seventy-seven women in other majors,

67. Cook noted dissimilarities of this kind and reported that academic high-school teachers and those teaching non-academic subjects had different mean scores on the MTAI (4).

The pattern of scores on the Allport-Vernon-Lindzey Study of Values varies from one major field to another (3). For instance, for a group of academically talented young men planning a career in mathematics and physical sciences, high scores were found on the Theoretic and Aesthetic scales. For those intending to enter engineering, the mean Theoretic score was not so high, and the Economic scale replaced the Aesthetic scale in providing a high point in the profiles. Sanford's studies at Vassar likewise discovered personality differences between young women majoring in different fields.

There are some who believe that personality characteristics are not the same for elementary-school as for secondary-school teachers. And there is some evidence that this may be the case. The mean scores for one hundred prospective elementary-school teachers and one hundred forty-five prospective secondary-school teachers, all women, showed some variation on three scales of the HPAI: Emotional Stability, Confidence, and Personal Relations (1). The percentile equivalents of the mean scores for the one hundred subjects in the elementary-school group on the three scales were 82, 78, and 77, respectively, while for the one hundred forty-five subjects in the secondary-school group they were 70, 71, and 70. Cook also reports different mean scores for groups of teachers at different grade levels. His data reveal that the lowest scores on the MTAI were obtained by junior high school teachers; also, that high-school teachers with the master's degree scored higher than those without the advanced training (4).

It does seem, however, that we are in need of more systematic study of the relationship between personality and the grade levels at which our subjects are teaching or plan to teach. If there are differences between elementary- and secondary-school teachers, we may need to make corresponding allowances in planning studies of teacher effectiveness and personality characteristics.

It seems reasonable to think, although there is little direct evidence,

that situational conditions are determinants of a teacher's effectiveness and of the personality traits characteristic of successful teachers. We should probably investigate such questions as the following:

Is a teacher's effectiveness modified in any way by his value system and that of his pupils, their parents, and the school administration? May a teacher be successful in one type of community but not in another?

Just what features of a community affect a teacher's competence? Is the socioeconomic status of his pupils related to his measured effectiveness?

How does administrative behavior affect a teacher's behavior? May some teachers be successful under an authoritarian regime but not under one that is markedly permissive?

What conditions reduce or increase a teacher's morale, and how does morale affect success?

What effect does the instructional staff have on the competence of a given teacher?

If these questions, and many others of a similar nature, are pertinent, we need to investigate them in some detail before we can expect to predict a prospective teacher's success from personality scores. We should remember, too, not to confuse knowledge about average characteristics of a group of teachers with knowledge of the traits peculiar to individual teachers. The qualities of the group do not determine the attributes of individuals. The HPAI profiles of two individuals may be quite different, and each may be different from the average for the group. If we are interested in individuals, we must study individuals and not simply averages. Typically, variability is large within any group, so that mean scores on a given test may be different for elementary-school and secondary-school teachers, and yet there is likely to be a great deal of overlap.

The investigations reported during the last ten years vary from simple descriptions through zero-order correlations and *t* tests to analyses of variance and covariance and multivariate analyses. One wonders whether the statistical analyses are always justified in view of the kinds of data collected and the samples studied. It may be that we have progressed in our research to the point where we need more than simple univariate analyses, but it may also be that we

could make more rapid progress even now if we were to rely on careful, systematic observational techniques to provide us with basic information from which to formulate hypotheses susceptible to experimental and statistical tests.

There is the question, too, of whom we should use as subjects. Should we deliberately seek to obtain highly heterogeneous groups, and should we be delighted when our sample, by chance, turns out to be very heterogeneous? If so, why? After all, the biologist does not ask about the growth pattern of bacteria in general, but rather about some particular bacterium in a particular environment. Possibly we need to ask questions about a particular type of teacher in a particular type of situation rather than simply questions about teachers in general.

Is there real justification for trying to describe *the* teacher personality or *the* personality of *the* successful teacher? Child psychologists have pointed out the weakness of trying to describe *the* child. A composite picture of *the* child is a description of no child at all. The more characteristics we include in our picture, the more difficulty we shall have in locating a single individual who fits the description. And our uncertainty is multiplied as we deal with traits that are independent of one another. The same kind of caution holds for teachers and successful teachers as well as for children.

Another question: how are we to select the traits to be studied? Many investigators have used what may be termed a *normative approach*. That is, they try out a wide variety of personality tests to determine which, if any, are related to their criterion of teaching competence. They report coefficients of correlation or t ratios, F ratios, and so on, and then rest on their oars. Rarely do they gather more data to determine just how well new observations correspond to predictions. By contrast, astronomers and physicists do not stop with a prediction; they check, by observation or experiment, to determine the accuracy of their predictions. In our attempts to predict success in teaching, should we not also, besides preparing the predictive formula

and making the predictions, observe how well the predictions correspond with observations?

In contrast to the normative approach we have a few investigations in which the research has been theory-oriented and even fewer in which the efficiency of the two methods of prediction is compared. In one exception, it was quite clear that the theoretical approach led to "better" results than the normative type of study. Even in this case, however, there was no follow-up to determine whether similar results would be obtained with other groups. I have in my files the results of a study in which the tests used were those used in the theory-oriented investigation just mentioned; my results were negative. Nonetheless, research in this field will be improved if we select our tests on the basis of some reasonable theory about teachers' personalities.

Why, for instance, should we expect "rate of tapping" to be a useful predictor of teaching success? Or why should we think that skill in adding two-place numbers should differentiate between effective and non-effective teachers? It is possible that research results would be more "encouraging" if we gave more attention to the selection of predictors and to the choice of statistical analyses appropriate for the data gathered and the sample studied.

Too often investigators are unduly optimistic about the practical significance of their results. How practical is it to conclude from correlations in the .40's and .50's that certain traits will distinguish between good and poor teachers? Is it realistic to conclude from a correlation of less than .30 that a method "seems to hold possibilities"?

Are we making the best use of our research time and facilities if we carry out intensive statistical analyses with scores from tests that are probably not sufficiently reliable to permit effective individual prediction? Samples are often small, and various parts of the analyses are based on different numbers of subjects. It is, of course, sometimes difficult to get complete data for all subjects, but would our results not be more amenable to sound interpretation if we used a constant sample? Item analyses with fourteen and even eight cases are not

likely to produce stable results. Is an investigator making wise use of his time when he conducts this type of research? Factor analyses are best viewed as preliminary studies that should lead to hypotheses to be tested in follow-up studies. Yet the follow-up study is rarely reported. As has been said before, infrequently indeed are studies repeated; it appears to be infra dig to do a piece of research over again.

Research on teacher effectiveness has changed in the last forty years; yet it sometimes seems that the more it changes, the more it remains the same. "The correlation between general scholarship and teaching effectiveness was .61." "This coefficient of correlation [that is, .46 between marks in student teaching and measures of scholastic achievement] is the highest one found in this investigation." The first quotation appeared in 1919, and the second in 1954. There are some issues that need no further research, and there remains little doubt that teachers must know their subject matter.

Is it not true, as one writer has suggested, that many of our results are inconclusive and banal? Are our efforts well directed when we arrive at conclusions like these: teachers must have self-control and enthusiasm, physical stamina, and a sense of dedication; they should like children and their subject matter; and they should be well integrated, warm and firm, socially acceptable, mature, businesslike, honest, sincere, and polite. It is quite possible that our research might be more productive if it were governed less by sentiment and more by a scientific orientation guided by appropriate questions and grounded in sound theories.

We have directed our attention to questions about the criteria of teaching competence. We have suggested that personality traits are important since the teaching-learning process takes place in a social setting. We have considered some of the issues related to the measurement of personality traits. And we took a look at the recent research on teacher personalities and the prediction of teaching effectiveness.

We have asked whether we are directing our attention to significant questions and employing appropriate techniques. We have ques-

tioned whether we are deluding ourselves when we ask about *the* personality of *the* teacher and have proposed that there are probably many kinds of teachers who may be successful under specific conditions and for stated purposes. It may be that "Rose is a rose is a rose," but who will assert with equal confidence that "Teacher is a teacher is a teacher"?

Statistical analyses may never lead to highly accurate predictive formulas for individuals, yet we must be interested in the individual. The philosophy of prediction applied to problems in the medical, industrial, and business fields may not be appropriate for the selection of individuals for specific educational programs and for the prediction of their success as students or teachers. We may have a serious responsibility when we accept or reject individuals for a teacher-education program or any kind of educational program. The consequence of acceptance or rejection may be more far-reaching in education than in industry or medicine. Is a prediction of an individual's success as a teacher likely to be accurate? Does the very notion carry with it certain assumptions of stability that are not realistic? Does it ignore the fact that in the course of training we may do something to enhance the probability of success in teaching? What happens to the individual while he is in training or in service is surely more than a stochastic, random, chance matter. Teachers are born and made. Effective research on the best methods for "making" teachers may turn out to be of more worth than research on prediction with its neglect of education and other environmental influences.

NOTES

1. Based on unpublished data in the writer's files.
2. Paper read at the annual meeting of the American Personnel and Guidance Association, 1956.
3. Unpublished data, Center for the Study of Higher Education, University of California, Berkeley.
4. *The American Association of Colleges for Teacher Education: Seventh Yearbook* (Oneonta, New York: American Association of Colleges for Teacher Education, 1954).

J. W. GETZELS
P. W. JACKSON
University of Chicago

Research on the Variable Teacher. Some Comments

The preceding five papers provide a portrait of research on teacher personality. Each in its own way points to a significant area of activity in this field. Together they complement one another.

Rabinowitz and and Crawford focus on the important problem of teacher shortage and identify a number of variables associated with a persistent desire to remain in teaching. The variables they deal with are largely demographic, effectively illustrating the relevance of a sociologically oriented approach to the understanding of persistence in teaching. Barr, who starts with the assumption that teacher effectiveness is at least in part a function of teacher personality, describes an instrument designed to assess certain aspects of personality. The instrument focuses on the teacher's view of her own behavior using a set of terms descriptive of personal qualities. Gowan, also, deals with the relationship between teacher effectiveness and self-report instruments. He reviews the strengths and weaknesses of these instruments and argues that despite the limitations of present self-report tests they can continue to be useful for the study of teacher personality.

Moving from an analysis of teacher traits to the relationship between these traits and pupil change, Heil and Washburne hypothesize that teacher influence is conditioned by both the type of teacher and the type of children with whom she deals. Their data suggest that

J. W. GETZELS is a professor of education at the University of Chicago. P. W. JACKSON is an associate professor of education at the University of Chicago.

this kind of interaction may be crucial for understanding teacher effectiveness.

Directly or indirectly, each paper comments on what Heil and Washburne have called the "null results" of research on teacher personality. Tyler focuses on exactly this problem. He identifies three issues inherent in all work on teacher personality: (*a*) the problem of the criterion (To what are we predicting?); (*b*) The problem of the personality instrument (With what are we predicting?); (*c*) The problem of research design (How are we predicting?). He charges that the bulk of research to date has failed to solve each of these problems. We have not agreed on an adequate criterion of good teaching; we have not settled on a relevant conception of personality; we have not chosen research design appropriate to our problem.

If we grant the validity and the timeliness of Tyler's conclusions, it seems appropriate to conjecture on the sources of this failure. An analysis of changes in the image of the teacher and of teaching on the one hand and of the character of research on teacher personality on the other may lead to a greater understanding of our problem and hopefully to some suggestions toward a solution.

Public images of specific occupations change over time. This change, if it is more than superficial, is paralleled by corresponding shifts in the actual behavior of people in the occupation and ultimately by changes in the kind of people attracted to that type of work. The kindly "family doctor," for example, is giving way to the emerging image of the efficient medical specialist, who differs from his predecessor not only in training but in personality. The hoarse-voiced army sergeant of twenty years ago is slowly being replaced by the more soft-spoken graduate of the leadership training program. In the teaching profession it is also possible to identify changes. Today's teacher differs significantly from the teacher of fifty, or even twenty-five, years ago. These differences and their relationship to the concept of the "good" teacher and to research on teacher personality seem worthy of consideration.

At the turn of the century our view of teachers and teaching was

strongly colored by our conceptions of historically older social arrangements and by a rather naïve model of mental operations. The ideal relationship between teacher and pupil was similar to that of leader and follower, of master and apprentice. The goals of teaching were principally those of literacy and mental discipline. The teacher before the class, facing rows of silent students, entertained few doubts concerning what she must do and how it must be done. The children also, despite subvocal protests, were no less aware of the behavior considered proper to their status. Teacher and student confronted each other. Consider, for example, the following view of the teacher-pupil relationship presented in 1892 by William James in his famous *Talks to Teachers.* James said:

> The science of psychology, and whatever science of general pedagogics may be based on it, are in fact much like the science of war. . . . In war, all you have to do is to work your enemy into a position from which the natural obstacles prevent him from escaping if he tries to; then to fall on him in numbers superior to his own, at a moment when you have led him to think you far away; and so, with a minimum of exposure of your own troop, to hack his force to pieces, and take the remainder prisoners. Just so, in teaching, you must simply work your pupil into such a state of interest in what you are going to teach him that every other object of attention is banished from his mind; then reveal it to him so impressively that he will remember the occasion to his dying day; and finally fill him with devouring curiosity to know what the next steps in connection with the subject are. . . . The mind of your own enemy, the pupil, is working away from you as keenly and eagerly as is the mind of the commander on the other side from the scientific general. Just what the respective enemies want and think, and what they know and do not know, are as hard things for the teacher as for the general to find out. Divination and perception, not psychological pedagogics or theoretic strategy, are the only helpers here [1].

The military analogy suggested by James could, of course, be amplified by pointing to the importance of "drill" in the classrooms of that period, to the unvarying regimen of the school day, to the titles "sir" and "ma'am" used in addressing the teacher, or to the gold stars awarded the academic victors.

While this image of teaching and the teacher is, to be sure, a caricature, it bears enough resemblance to reality to make the point that the teacher at the turn of the century—and hence the "good" teacher

of that period—was a very different creature from the teacher of today. Between then and now, transitional images can be identified, each reflecting important changes in our conception of education.

The period that followed the one just described saw the demise of the earlier conception of mental operations. Our view of discrete mental functions began to give way to a view of the whole organism adapting to his world. Phenomena did not seem to be experienced as separate stimuli. Instead, apparently discrete stimuli were often seen as "patterned" or "belonging together." The organism did not seem passive in the face of his environment. He did not merely "receive" a stimulus, he "did" something to it. The model of the "memorizing" student gave way to the model of the "problem-solving" student.

Psychologists were dealing with "similarity" and "proximity," with "good continuation" and "closure." Teachers were dealing with "relations" and "integrations," with "problem-solving" and "insight." Flashcards, spelling bees, drills, became progressively outmoded. Classroom procedures for teaching reading, writing, and arithmetic were undergoing crucial modification. Johnnie saw CAT as a pattern so why have him cut it apart into single letters only to put them back together again as a word which he was ready to see whole in the first place? In arithmetic 3×2 and 2×3 were taught as one pattern, and, if the child did not automatically call out "six" to these patterns (as he was able to do during the preceding period when he learned them by rote), at least it was hoped that he now saw the relationship between the two figures and could calculate the answer if he had to. Attempts were made to integrate traditionally separate subjects so that what was learned in English was relevant to what was learned in history. In sum, the teacher's task was seen as one of structuring the materials to be learned in such a way that they might be perceived most readily as a meaningful relationship.

But this image of teaching also underwent metamorphosis. It became evident that the student not only patterned his environment cognitively but also made conscious and unconscious choices as a

function of his drives, needs, values, attitudes, and other internal forces. These choices, it was argued, could and should be used as guides in educational planning and teaching. Learning seemed not only a connective and cognitive process; it was also an affective and motivational process. The model of the "memorizing" student that was transformed into the model of the "problem-solving" student was transmuted yet again, this time to a model of the "self-expressing" student.

Meeting the needs of children became increasingly the prevailing educational slogan, and the teacher was required to take into account the unique personality of each student. Nothing about the child—his wishes, his interests, his transient feelings, or his family background—could be safely ignored. For these, it was felt, predisposed the would-be learner to accept, reject, or distort what the school was trying to do. As stated in *Progressive Education Advances*, a publication of the Progressive Education Association:

> The pattern of each student's education should grow out of his capacities, interests, and needs. The wide range of individual capacities, interests, and needs must be recognized, and both school and college should provide the flexible and varied organization necessary to meet the needs growing out of individual differences [2: 20].

The aim of education, the authors continue, "is realized best when the needs of youth are identified and used as criteria for the selection and organization of educational experiences and the organization in the life of the school" (2: 39).

Obviously, there were dramatic changes in the relationship between pupil and teacher at this time, symbolized perhaps most sharply by the physical rearrangement of the classroom. The pupil's chair was unbolted from the floor and left free to be moved as the child needed to move it. The teacher's dais had, of course, disappeared before this, but even her desk, the traditional locus of control, was now shifted from the front of the room to an inconspicuous place on the side or in a corner.

The emphasis on the child and his interaction with society soon made it clear that the classroom too is a small society in which there exist group needs as well as individual ones. In one way or another the argument was made that the learner and the teacher, learning and teaching, may best be thought of as an interpersonal process, and the teacher's role was conceived as that of another member of a democratic group. To be sure, the teacher was sometimes the leader. But then he was sometimes the follower, and at all times everyone planned everything together. Perhaps the prototype of this model is found in the classic and influential study of democratic, authoritarian, and laissez faire leadership demonstrating the effect of group structure on task performance. The teacher was now asked to deal with such new variables as belongingness, cohesiveness, morale, classroom climate.

This movement, frequently referred to as "group dynamics," and its relation to education may perhaps best be portrayed by citing several relevant publications. In a book entitled *Education for What Is Real*, the author states:

> Many of our schools seem to be ineffective because we get the building, the materials, the curriculum, and the teachers all ready, and then the wrong student body comes to school. Any curriculum set up in advance is bound to fail, because education is an emerging process [3: 82–83].
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> We do not know that man is naturally a social being, but we do know that whether he likes it or not (and he appears to like it), he is born into a social situation. In the social situation he cannot successfully go forward alone. He must learn that the social good is the greatest good for him as an individual, and that he can best achieve his place in the sun with the help of others and by helping others. This calls for cooperation as a basic way of life [3: 105].

Or again, from a book entitled *Human Relations and Curriculum Change:*

> We have indicated two aspects of the discipline needed by educators if they are to engineer changes in the school and in the persons and groups that this involves, both in the school and in the community. We have said that educators need a social engineering theory which provides conceptual tools for diagnosing the possibilities for change, for locating the forces which support it, and for

devising change procedures for those which oppose it; that they need certain social-psychological understandings if they are to be effective in re-educating the persons and groups involved in the change; that they need an understanding of the group process, of its leadership and membership skills and of how these are used to induce and stabilize the restructuring of a social system such as a school [4].

Finally, from a handbook for school administrators entitled *The Dynamics of Group Action:*

This new philosophy, labelled 'democratic' or 'participative' calls for everybody to get into the act of making decisions and running the enterprise. Things have moved a long way from the old days when Mr. Big called his staff together and gave orders. . . .

This new philosophy of administration calls for a more complex organization, for involvement of more teachers and laymen and even pupils with administrators in making decisions and policies. It calls for special skills and a knowledge of principles we are not sure of. It challenges us [5].

The images we have been describing are, of course, oversimplifications and in many ways caricatures, as they must necessarily be in such brief sketches. They shade off into one another and overlap, the significant issue at any given time being one of relative emphasis rather than all-or-none presence or absence of a particular point of view. In any event the essential point remains. There is not one image of the teacher, but several.

The oft-repeated null results of teacher-personality studies are frequently ascribed to weaknesses of the research instruments, especially of the self-report tests. It is as if to say that if we only had soundly constructed tests—any soundly constructed tests—things would be different. Present self-report instruments are, of course, subject to unreliability, fakability, and invalidity. But there are other techniques that are perhaps less liable to these defects. Projective instruments are said to be somewhat less vulnerable to faking; sociometric and situational tests are said to be somewhat more reliable. Both these newer types of techniques have been amply applied to research on teacher personality. The Rorschach, the TAT, projective drawing tests, sentence completions, word-association tests, and all kinds of

"exploratory" indirect instruments based on the projective hypothesis have been tried. Teachers have been asked to rate one another. Pupils by the thousands have been asked to rate their teachers. Teachers have been observed by other teachers, by principals, and by clinicians. But the results have remained essentially null, at least no less null than with self-reports.

It seems a fair inference that the test by itself may not be *the* significant variable in the current failure of research in teacher personality. The use to which present instruments are put may be as important as the instruments themselves. When we examine the application of personality tests to teacher research, two observations follow: (*a*) The tests are frequently chosen for irrelevant reasons; (*b*) The tests are frequently chosen for no apparent reason at all.

Consider, for example, the choice of a test in the typical study of teaching and of teacher personality. Often this choice is based solely on the success of the test in studying other types of problems and other types of people. The premise seems to be that if a test is good for anything, it is good for studying teachers. If a test has been found that differentiates "at the .05 level" between neurotics and non-neurotics, or between homosexuals and non-homosexuals, why not between "effective" and "ineffective" teachers? If a test has been shown to be useful clinically in psychological diagnosis, why not use it to predict grades in student teaching? If a test seems to predict success in college achievement, why not use it to predict success in classroom practice? The fact is that these criteria are largely irrelevant to the teaching situation, and even the "perfect" test in the one situation is unlikely to produce fruitful results in the other. And this is exactly what has been found in one teacher study after another.

Many researchers are of course aware that such criteria are not sufficient reason for choosing a particular test. But they appear to have no other reason, and so they compensate by choosing *all* tests, or at least as many as their resources will support. Thus, one study uses no fewer than 225 predictor variables, most of which are person-

ality items. The range of variables extends all the way from literary interests on the Kuder Preference Record to measures of "a desire to participate in community organizations" to Paranoia scores on the Minnesota Multiphasic Personality Inventory. Incidentally, women scoring low in literary interests are said to make better teachers than women scoring high, and men who wish to participate in three or less community organizations make better teachers than those who wish to participate in four or more. A rationale for these findings or for the original choice of instruments is never given.

Another study used seventy-four personality variables, ranging from a test in interest in number manipulation to a test of "behavior in embarrassing social situations" to a test of need achievement. (In this study it was found that a high interest in literature was related to success in instructor training.) Our quarrel of course is not with the number of variables used or even with the contradictory quality of the findings but rather with the reason—or perhaps better, lack of reason—for the choice of instruments or variables.

Unreasonableness in the choice of instruments is not the only methodological difficulty. There is frequently little or no relation between the researcher's conception of effective teaching and the conception of effectiveness held by those who establish his criterion groups. Further, it is not uncommon to find basic disagreements among those legitimately expected to have dependable judgments of effective teaching. To cite one example, Page and Travers asked a college faculty in elementary education to identify students with personal qualities that might seriously interfere with adequacy of performance as classroom teachers. They then administered a projective drawing test to the students and scored it for the presence or absence of psychological disturbance. The difference in scores between those who had and those who had not been selected by the faculty as potentially inadequate teachers was nil. It might be concluded, therefore, that the drawing test was of no value in identifying students whose personality seemed ill suited to teaching.

Dissatisfied with their results, Page and Travers examined the faculty ratings and their own ratings more closely. The basic methodological difficulty that they observed, and the essential point we are trying to make, may best be expressed in the researchers' own words:

> . . . an examination of the aspects of behavior in which the faculty's judgments were based, made it obvious that the faculty members had a different frame of reference in selecting students for potential inadequacy as teachers than had those who rated the drawings. The latter were looking for emotional disturbance and pathology. The faculty members were making judgments on the basis of the student's ability to adapt to their standards and to show the kinds of behavior which met with approval in the teacher training program. This might or might not be consistent with a high rating for emotional disturbance [6: 42].
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> For example, many students who were not screened out by the faculty received high ratings for psychological disturbance and were also judged to possess extreme amounts of the "inadequacy personality" syndrome. However, it does indicate why ratings based on clinical judgments have so often proved to be faulty as a selective device. Clinicians apparently have a different frame of reference than faculty members of an education department [6: 43].

In addition to the conflict between the researcher and the raters of teacher effectiveness there is often conflict among the raters themselves. A rather nice example is found in a study of Air Force instructors who were assessed on fifty-three personality traits and rated for effective teaching by students, peers, and supervisors. The results were illuminating. For example, the researcher hypothesized that "Appreciation of Humor" would be positively related to teacher effectiveness. He found no significant relationships for student and peer ratings but a significant *negative* relationship with supervisor ratings. He hypothesized that "Interest in Efficient Organization and Scheduling" would be positively related to effectiveness ratings, and he did find the hypothesized relationship, but only for supervisors' ratings. The coefficients of correlation for pupil and peer ratings were not significant. He hypothesized that the "Need To Be Inconspicuous" would be negatively related to effective-

ness and found the hypothesized effect for peer ratings but not for student or supervisor ratings. He hypothesized that the "Personal Risk-taking" would be negatively related to effectiveness and indeed found this to be the case for student ratings but not for peer or supervisor ratings. The point to be made here is not the failure of the researcher's hypotheses but rather their differential success using different judges of effectiveness. Indeed, there was not a single variable among the fifty-three that yielded a significant coefficient of correlation for all three or even two groups of judges.

We have already indicated that in both our description of teacher images and our sketch of teacher research we were forced by limitations of space to some oversimplification. Nonetheless, the two essential points remain: the image of the teacher has undergone significant change so that many images of the "good" teacher exist today; research on teacher personality has been dictated more by technical concerns than by a primary consideration of teaching and the "good" teacher. For example, it is clear that the variable "dominance" might be of great importance given the image of the good teacher sketched by William James. It is doubtful, however, whether this variable has the same importance given the image of the good teacher sketched by the Progressive Education Association. Similarly, the variable "behavior in embarrassing social situations" might be relevant for understanding the good teacher as viewed in *Education for What Is Real.* It is doubtful that this variable would be as relevant if the teacher's chief concerns were cognitive rather than affective. Again, the variable "need to be inconspicuous" might be crucial when the teacher is seen as just another member of a working group—surely less crucial for other images of the good teacher. In sum, we would argue that at least one reason for the recurring null results of research on teacher personality is the alienation between changing conceptions of teaching and the variables, procedures, and purposes of research on teacher personality.

The emphasis of teacher research to date has been on the search

for personal traits associated with what might be called "teachership." In a comprehensive review of the literature Stogdill points to a similar search for traits associated with "leadership," with the following results:

> It becomes clear that an adequate analysis of leadership involves not only a study of leaders but also of situations. . . . The evidence suggests that leadership is a relation that exists between persons in a social situation, and that persons who are leaders in one situation may not necessarily be leaders in other situations. Must it then be assumed that leadership is entirely incidental, haphazard, and unpredictable? Not at all. The very studies which provide the strongest arguments for the situational nature of leadership also supply the strongest evidence indicating that leadership patterns as well as non-leadership patterns of behavior are persistent and relatively stable [7].

Just as in earlier studies of leadership, research on teachership has typically been prediction-oriented—the chief aim being to locate variables that would aid in selection, recruitment, and training of teachers. If, for example, membership in less than three community organizations is found empirically to be associated with good teaching, inquiry stops: a "predictor variable" has been uncovered. If good teachers are found empirically to be less interested in literary matters than are poor teachers, this too is accepted as a predictor variable. No attempt is made to understand the reason for the relationship. If "appreciation of humor" is negatively related to effectiveness ratings, it is accepted uncritically as a predictor variable, even though it was originally expected to relate positively to the ratings.

It seems to us that the leap from observation to prediction omits two essential steps of systematic inquiry. It omits the precise description of the phenomena under study and the attempt, however conjectural, to conceptualize or understand the phenomena. The inclusion of these two steps—so that inquiry moves from observation to description to attempts to understand and only then to prediction—might be more fruitful than the present trial-and-error search for correlations between conceptually barren "predictor variables" and teachership.

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MARK M. KRUG
University of Chicago

"Safe" Textbooks and Citizenship Education

It seems to be generally agreed that American history and civics textbooks for junior and senior high schools have greatly improved in recent years. The books are usually written by competent scholars. The language and style are suitable for young readers, and the content is free of bias and prejudice. The publishers take care that the appearance is attractive, and the pages abound in pictures and graphs. Textbooks usually contain a wealth of study aids, suggested assignments, tests, and quizzes. The publishers usually also supply study guides and teachers' manuals.

Yet there is a growing undercurrent of dissatisfaction. While textbook writers have eliminated many evils of the past, they have failed to produce textbooks that reflect the changing objectives in the social studies and take into account new research and insights into the learning process. A. Alexander, a textbook analyst of the Board of Education of the City of New York wrote recently:

> Many of the textbooks are strangely dull, lifeless and bear striking resemblances to each other. . . . Critical of neither the past nor the present, they encourage little respect for the historian's craft. . . . They betray a basic lack of confidence in presenting this country full face because some of the warts may show. . . . *Many books present few or no serious problems.* Conscious stimulation on the part of the author, in the direction of improving conditions is less frequent today [1; italics mine].

Henry Steel Commager, who agreed with this appraisal, added "The whole purpose seems to be to take out any ideas to which

MARK M. KRUG, assistant professor of education in history in the Graduate School of Education of the University of Chicago, is coordinator of the Master of Arts in Teaching Program (Social Studies).

anybody might object and to balance all sections and interests" (2).

These are grave charges, which deserve serious study and thought. Considering the continued skepticism with which students and parents regard the social studies and considering the crucial importance of the social studies in this era of ideological coexistence and competition of our democratic system with Soviet totalitarianism, the importance of an objective, *sine ira et studie,* analysis of history and civics textbooks cannot be overemphasized. Although instruction based on textbooks is often disparaged, the textbook "method" reigns supreme in the teaching of the social studies in high schools throughout the country.

Complaints against the textbooks can be boiled down to two:

First, textbooks fail to present the United States of America as it is—a democracy which, using De Tocqueville's criterion, has proved capable of providing the most good for the most people but a democracy which is in constant need of a conscious and determined effort for improvement and perfection and which is challenged to deal successfully with a variety of new problems, issues, and conflicts that result from the ever changing conditions of a modern society. Textbooks that avoid offending various interests and levels of authority and legitimate and not-so-legitimate pressure groups eliminate the discussion of controversial issues. The omission has an adverse effect on the formulation of the social-studies curriculum. The net result is the abdication of responsibility for promoting refinement and improvement of our democracy. What forces are pressing for textbooks that fail to deal candidly and forthrightly with the weak spots in our democratic armor? The question is one that deserves serious inquiry.

The second complaint flows directly from the first. By omitting or glossing over controversial issues, textbooks fail to provide students with opportunities for critical thinking, for gaining insight into historical or civic problems, for learning the skills needed for problem-solving which alone can prepare our young people for intelligent choice-making required of citizens in a democracy.

There seems to be a dichotomy between the views expressed by scholars and theoreticians in the field of social studies and the textbook writers. Scholars, in listing objectives of the social studies in high school, put great emphasis on the development of skills in critical thinking and the ability to analyze and resolve problems. Wesley and Wronski state that an effective social-studies program should not only enable the student to acquire skills in critical thinking but should also lead him in the direction of acquiring desirable attitudes:

> Such a student . . . respects the dignity of the individual . . . believes in the equality of opportunity for all people . . . upholds the law . . . works cooperatively for the good of all . . . *believes that social problems are susceptible to rational analysis and solution. . . . The teacher in the United States, and especially the teacher of the social studies, should regard himself as one of the custodians of our Constitution and particularly of our Bill of Rights* [3; italics mine].

James Quillen wrote: "To be in harmony with democratic ideals and the demands of a rapidly changing, industrial-urban culture, methods in social studies should be based on the application of democratic values *and the behaviors involved in critical thinking. . . . The task of the social studies teacher is to develop citizens who know and love democracy and can make it work effectively*" (4; italics mine).

Earl Johnson has for many years advocated a commitment on the part of the social-studies teacher to "a crusade for human values which demands, above all else, teachers who are educated *to improve* their own and their students' skill and insight in selecting, making and *remaking*, and *pursuing* and enjoying the values to which the democratic conception of man-in-society is dedicated" (5; italics mine).

Traditional teaching omits or gingerly skirts areas of conflict in our society and concentrates on descriptive matter, mastery of facts, and the memorizing of handed-down relationships. An outspoken exposition of the view that this kind of teaching is contradictory to the new theories of learning and to the essence of democracy is

to be found in *Teaching High School Social Studies* by Hunt and Metcalf. The authors charge that many textbook writers use the word *problem* as a synonym for *chapter* or *unit of study*. "Activities suggested at chapter ends," they write, "are called 'problems' even though there is nothing even remotely problematic about them. . . . The practice of calling old subjects by new names has given the impression that schools are more progressive than they used to be" (6: 206). The authors write: "Textbooks have been modernized in form; they have been 'dressed up.' But what textbooks *say* today does not depart fundamentally from what they have been saying for decades" (6: 202; italics mine).

Hunt and Metcalf suggest that teaching which ignores real problems—issues that puzzle and challenge the student, that demand a personal commitment to the solution (however tentative) of the problems—is inconsistent with democratic education and with new insights into the theory and the process of learning. New research indicates that effective learning takes place when the student's "facts," attitudes, and values are challenged and replaced by new insights and understandings.

Tyler wrote, "As long as the learner does not recognize that his earlier modes of behavior are inappropriate, he will keep on doing what he has been doing and will not really learn anything new" (7). Consequently, Hunt and Metcalf conclude that teaching materials should consist of broadly social and highly controversial issues of the culture; knowledges, values, and attitudes of students; and relevant data of the social sciences (6: 223). One could question the emphasis on highly controversial issues. It would seem that the occasional study of controversial and relevant issues in the context of an honestly critical study of history and civics would be enough to stimulate and challenge our growing adolescents and assure effective learning. But surely there should be general agreement that textbook writers and social-studies teachers should not exclude discussion and research into what Hunt and Metcalf call "closed areas," among which they list race and minority-group relations, social

class, religion and morality, nationalism and patriotism (6: 230).

It might be useful to examine some of the textbooks now in use to determine whether the criticisms are justified. We shall look at three popular civics textbooks to see whether, as Hunt and Metcalf say, they leave "the student, unless he is very bright, largely untouched and unstimulated" (6: 361).

Our American Government (8) would score high on any of the more elaborate check lists used for the evaluation of textbooks. The authors are competent scholars and undoubtedly eminently qualified, and their textbook reflects a thorough mastery of the subject. They write well and have carefully kept in mind the reading abilities of the average high-school student. The book is attractive and abounds in excellent graphs and pictures. At the end of each chapter there are elaborate, maybe too elaborate, lists of assignments and questions. It is, in many respects, an admirable textbook.

However, some of the critical comments made by Alexander, Hunt and Metcalf, and others seem to apply to *Our American Government*. The Preface states that the textbook had four purposes: "to stimulate interest in our government; to provide essential understanding of the operations of our government; to promote careful thinking about governmental problems; to encourage active participation in governmental activities" (8: v). The text adopts the thesis of "careful thinking" but explicitly avoids the important approach of "critical thinking." It is fair to conclude that this avoidance is not an accident. Can this treatment imbue students with a readiness to contribute their share, however small, to the betterment and improvement of our democratic system? The work deals carefully but not critically with the question of the denial of basic democratic rights to minority groups. While millions of Negroes and whites in this country and many more millions of Asians and Africans consider the wiping out of racial discrimination in voting, education, and employment as a test of our sincere devotion to democratic principles, the textbook is content with a general statement: "The idea of minority rights is fundamental in our system of

government" (8: 14). But no question is raised whether, or to what extent, this fundamental idea is ignored or what specific progress has been made in recent years in assuring fundamental rights to minority groups.

The treatment of the 1954 Supreme Court desegregation decision may best illustrate our major point, namely, that some textbooks make a strenuous effort to minimize and underrate some of the important and explosive social and political issues of our contemporary national life and society. By doing so they immobilize potential forces for betterment. Of the 1954 decision, the authors of *Our American Government* say:

> The problem of equal educational opportunity is especially real *in some sections of the country where different schools are provided for children of different races.* In such cases the *minority group* often suffers because of its inferior schools.
>
> In 1954 the United States Supreme Court made a decision stating that separate schools for Negro children were unconstitutional. This decision caused much controversy, but there has been general agreement, however, that some system must be developed to provide equal educational opportunities for all children—regardless of race, nationality, religion, or whether they live in cities or in rural areas [8: 536; italics mine].

The quotation is given in its entirety. There obviously is no resemblance between this carefully safe description of a crucial issue and what the students know about Little Rock, about the defiant resistance of most of the southern states to the Court's mandate, or about the closing of the public schools in a number of southern communities. Would it not have been better and educationally sounder to report frankly the determination of some southern states to resist desegregation, to comment judiciously on the Little Rock situation, and point out the extraordinary progress toward peaceful integration of schools in Kentucky, Maryland, Delaware, Washington, D.C., and some communities in Tennessee and Virginia?

The work is careful to be neutral on the issue of discrimination in housing. It reads: "There are restrictions on homes for *some*

people. Members of some races, religions, and nationalities find that *some* communities are closed to them. . . . This is one of the areas where the practice of democracy is not perfect. But we are making progress" (8: 548–49; italics mine).

The work goes on to say that there are some who believe that the progress in wiping out discrimination in housing has been to slow and others who feel that an "order of a court does not change feelings" (8: 549) and that changes must take a long time. The description of the problem is carefully concluded with questions: "Which is the correct position? How can the problem of restrictions on housing and a place to live be solved democratically?" (8: 550).

The same detached objectivity is maintained in dealing with the poll tax in five southern states. Nowhere does the work state that a poll tax in those states is used, as the Civil Rights Commission and Attorney General Rogers have recently proved, to prevent the vast majority of Negroes from exercising their right of franchise. In the face of this clearly unconstitutional and undemocractic practice, which is distasteful even to many southern leaders and which has repeatedly caused acute embarrassment to our ambassadors and representatives in the United Nations and in the Asian and African capitals, the work reads:

> Opinions about the poll tax get close to one's beliefs about the nature of democratic government. Those who believe that all adult citizens are entitled to equal voting rights have long opposed the poll tax. They believe it is a device to keep persons from voting. Those who believe that some people are better able to decide public questions than are others tend to favor the poll tax [8: 69–70].

This is as far as the text commits itself on this basic and crucial issue of the right to vote, which is guaranteed to all citizens under the fifth amendment.

These examples give rise to several questions that in my opinion should be put to, and considered by, textbook writers in the field of history and civics. Does a clear and unequivocal commitment to the fundamental tenets of our democracy violate the injunction that textbooks should be free of bias and indoctrination? One can under-

stand the objective and impartial discussion in *Our American Government* on the merits and weaknesses of the seniority rule in Congress or on the advisability of federal compulsory arbitration in major labor-management disputes, but should this impartiality extend to the right of all citizens to enjoy the full benefits and all the rights and protections guaranteed to them in the Constitution? Is it not the responsibility of textbook writers and social-studies teachers, in this period of competition with an aggressive, self-confident totalitarian system, to stand foursquare on the proposition that our democracy will in the end be victorious in this contest because of our complete dedication to the ideals of equality of all our citizens and the dignity and the worth of all our people? Does not the exaggerated objectivity of the textbook writers validate the cited criticisms that our textbooks, while attractive in appearance and well written, fail to stimulate in students a genuine knowledgeable commitment to the democratic system of government and way of life, fail to imbue them with a desire to improve our society, and fail to prepare them for intelligent choice-making, which should be the basic characteristic of a citizen in a free democracy?

Another popular textbook, *Civics for Americans* (9), lists in addition to the traditional objective of imparting knowledge and understanding of the structure and basic concepts of American government, the following aim: "Increase student's knowledge of and skill in using the major techniques of *clear thinking* and problem solving" (9: 2; italics mine). Here again there is no use of the term *critical thinking*, which is so frequently demanded in the social-studies books on methods and yearbooks of the National Council for the Social Studies. And again one has to give careful consideration to the magic word *problem-solving*. If by *problem* one understands Socrates' and Dewey's sense of puzzlement, intelligent doubt, Tyler's feeling of challenge and discomfort with one's earlier modes of thinking, or Hunt and Metcalf's controversial issues in the "closed areas," then problems are not often found in *Civics for Americans*. The work describes in a clear and scholarly fashion the provisions

and the concepts inherent in the Bill of Rights, voting procedures, the structure and the decisions of the Supreme Court, but the problems of racial discrimination, of the denial of civil and political rights to large numbers of citizens, are dealt with in a gingerly and safe manner. The work describes the poll tax in these words:

> Some states have one or more requirements for voting in addition to those already named. For example, several states require the payment of a poll tax. This means that a voter must pay a certain amount of money in order to vote. The amount is small, perhaps one or two dollars. However, some states which require a poll tax also require that it be paid for a certain number of years before the election. If a voter has neglected to pay his tax, he may find that he owes ten dollars or more. If the voter is poor, he will probably not be able to pay his poll taxes and therefore lose his vote.
>
> Some states require citizens to pass a literacy test or to show a school graduation certificate before voting. A literacy test is given to find out whether a person can read and write. In one form of literacy test, the citizen is asked to study a paragraph or two for a few minutes and then answer a few printed questions based on the paragraph to test his understanding of it [9: 315–16].

I have quoted this passage on poll taxes and literacy tests in its entirety so as not to quote out of context. This is what the textbook has to say about a practice that has been denounced on innumerable occasions by presidents of the United States, by the Supreme Court, church organizations, and many senators and representatives (including southerners) as depriving large numbers of native-born American citizens of their right of franchise and as a gratuitous weapon given to the Soviet propaganda machine to besmirch the good name of our country all over the world.

Mrs. Eleanor Roosevelt, who has probably traveled abroad more than any other American of prominence, commented recently on the plan proposed by Attorney General William P. Rogers which calls for the federal district courts in the South to appoint referees who would register qualified Negro voters and insure that qualified Negroes be allowed to cast their ballots. She wrote: "It seems a pity that there has to be an argument about the best way to assure part of our citizenry the rights that it should automatically enjoy. . . . The colored peoples of the world, who are gradually gaining their

freedom, are sensitive to any outside influence that does not promise them consideration on equal basis with the whites. We had better understand this. Unless we do, we are apt to lose to the Soviet Union a great many countries which might otherwise be developed as democracies" (10).

There does not seem to be much relation between the avowed aim of the textbook, namely, to teach "clear thinking" by the use of three steps, "search for the facts, sift the facts, and solve the problem" (11), and the discussion, for instance, of the housing problem in big cities. The overriding impression one gets from the material on housing is that the spread of slum areas, which, as several recent studies have shown, have created veritable jungles of filth and crime in a number of big cities, has been arrested or even solved by prompt municipal or civic action. The textbook states: "Building laws prohibit overcrowding in apartment and tenement sections of our cities. Some cities have recently passed laws in which rooming houses are required to have a minimum window space for every room in order to insure proper lighting and sufficient fresh air. Laws of this kind have brought much improvement in living conditions" (9: 347).

This is correct and useful information, but would it not be fair and proper to add that in many cities these housing laws are violated or circumvented and not enforced? In another place the textbook states, "Many towns and cities have become conscious of such blighted areas and have acted to improve them before the situation becomes so bad that enormously expensive slum clearance projects are necessary" (9: 512). Would it not have been useful to add that many cities have not acted, that many cities have allowed the terrible spread of blighted areas and slums?

Finally, the textbook reaches this conclusion: "In recent years the clearing of slums in the large cities has done much to improve sanitary and living conditions" (9: 499). Would it be surprising if the student concluded that, while slums and skid rows in our cities were once a problem, they have been largely eliminated by

proper legislation and rehabilitation projects? It is extremely doubtful that experts on city planning and housing would agree with this conclusion. The facts are that blighted areas are growing and that juvenile delinquency has become a serious problem in many cities and that the federal government is expanding its program of assistance for slum clearance. It is also a fact, largely ignored or glossed over in the textbook, that the slum-clearance program is greatly hampered by potential and actual tensions and conflicts arising from racial and minority discrimination in housing. Julian H. Levi, an authority on neighborhood rehabilitation and executive director of the South East Chicago Commission, wrote recently: "It is a melancholy fact that American cities are in grave danger. When all that is being done to preserve them is weighed, it is too little and too late because we haven't understood the challenge" (12).

On fair and equal employment opportunities for all citizens, the text takes an unequivocal position. It points out that in some communities some people are denied jobs because of their race or religion: "People cannot be expected to be good citizens if they are denied rights which in our country are guaranteed to all" (9: 507). One wonders why the textbook could not have taken the same forthright position on the poll tax and on discrimination in housing and on other issues concerning the fundamental rights and privileges guaranteed to all Americans.

It is important to underscore that we are concentrating on only one basic shortcoming or weakness in *Civics for Americans,* which is admirable in many aspects. It is well written, it is based on sound historical research, and some units like the one on the American economy are excellent.

Many textbook writers undoubtedly have a logical rationale for avoiding controversial issues and for overlooking the "warts" (as A. Alexander, the textbook analyst, called them) on the face of American democracy. Textbook writers, like many teachers, are apparently convinced that any acknowledgment of some weak spots in our democracy would confuse our students and undermine their

devotion and faith in our system of government. They further maintain that it is the responsibility of the school to give the student basic wholesome, uncontroversial information. He has time to find out, they say, about the imperfections in our democracy after he leaves school, when he is more mature and better able to deal with controversial issues. The important thing, they feel, is that young people learn how our democracy functions and that it deserves the active concern and participation and support of all citizens.

This reasoning is based on several doubtful assumptions. First, it assumes, erroneously I believe, that the mind of a high-school student is a *tabula rasa* as far as information, attitudes, and values on civic issues are concerned. The approach assumes that he is unaware of facts and problems of discrimination, restrictive covenants in housing, anti-Semitism, and juvenile delinquency—unaware of the existence of slums and the occasional cases of corruption of public officials. Anyone who has taught high school or talked to high-school students knows they are keenly aware of Little Rock, Levittown, and Deerfield, crime, juvenile delinquency, and skid rows. Many of them have moved from one section of the city to another or from the city to the suburbs because of a changing neighborhood. They hear daily television newscasts that report extensively on the controversial "closed areas." Obviously, if our students are to gain new understandings, new insights, and gradually adopt sounder democratic attitudes, their bits and fragments of "knowledge," their beliefs, values, and prejudices must be challenged and subjected to the test of critical research and critical thinking. In this way effective learning can take place. In this way we can prepare our young generation for intelligent choice-making as citizens in a world that abounds in conflict and controversy. In this way we can succeed in preparing our young people to compete effectively in the battle of ideas between democracy and totalitarianism. The ostrich-like attitude adopted by many civics and history textbooks seems contrary to what researchers on the learning process have been recommending. Thelen wrote recently: "It is the purpose of education

not only to develop individual powers but also to prepare effective citizens. Our schools have the responsibility of helping children live as self-realizing people, not in a vacuum or a hermitage, but in a complex society. . . . They are going to manage others; interpret the world around them; make discoveries; *create social, political, and economic alternatives; ferret out facts; and persuade, promote, criticize, analyze, guide,* console, and teach" (13; italics mine).

It would seem logical to assume that our young people will love America more, not less, if they are given to understand that in spite of the difficulties, the conflicts, and the weaknesses, a free democracy provides the best opportunity for its citizens to enjoy the benefits of a "Good Life." They will love America more, not less, if they are made to realize that generations past have built America soundly and well but have still left for them the task of improving and refining our way of living.

Furthermore, realistic and challenging teaching of civics and United States history would prevent our students from becoming disillusioned cynics when they find out later that all is not sweetness and light in our politics and our society. Whether we like it or not, we will have to engage, in coming years, in many debates, directly or indirectly, with representatives of the Soviet Union, who will not fail to cite chapter and verse of the weak spots in our democratic society, who will, in the words of Nikita Khrushchev, describe us as "a tired old horse," lacking the will to make our country strong and vibrant, and lacking the faith and the ability to compete for the allegiance of the underdeveloped and the uncommitted nations. Our young people must be ready to accept this challenge. They must be aware of the shadows in our society, of the problems and unresolved conflicts. They must be prepared to defend intelligently the advantages of our way of life and our system of government and to point to the constant progress that is being made.

A graduate student from India recently reviewed a well-known history textbook in my course on social-studies methods. As a former teacher of the social studies in India, he was able to compare the

American textbook with the textbooks used in his country. He told the group that he was very much impressed with the scholarship of the authors, the fine use of language, the attractive appearance of the book, the abundance of pictures, graphs, and teaching aids. Before concluding his report, he told the class that he had one "small" criticism to offer. The authors, he said, failed to point even to one mistake or blunder committed by the United States in all its history. "I came to America," he said, "because I love this country and have a great deal of respect and admiration for your democracy, but I know and you know that the United States has not had a completely unblemished record in the conducting of its foreign policy. Why hide these mistakes and failures? This attitude only breeds suspicion and distrust and embarrasses your true friends abroad."

It is sometimes said that a great deal of pressure for excluding controversial issues from textbooks comes from the publishing companies. It is unfair, as some have done, to ascribe this attitude in any substantial measure to the desire of the publishers to assure for the textbooks the largest possible sale in all sections of the country. The publishing companies are genuinely and properly concerned with keeping textbooks free of bias, prejudice, and propaganda. Austin J. McCaffrey, executive secretary of the American Textbook Publishers Institute, said recently: "The textbook publisher takes very seriously his responsibility for releasing books which are free of bias, prejudice or the points of view of particular individuals or groups. . . . The textbook must never become a vehicle for social change. It must not set out 'to persuade' lest it become an instrument of propaganda" (14).

The second part of McCaffrey's statement represents the crux of the problem. Does the faithful presentation of areas of conflict in our society endanger the objectivity of a textbook? Does a commitment to basic principles and rights in our democracy constitute bias or propaganda?

Apparently some writers of textbooks in the social studies would answer no to these questions. The authors of an excellent civics textbook, *Government in Action* (15), state that the book was written "by teachers, for teachers" and do not hesitate to write without equivocation in a chapter entitled "The United States in the World": "There is no good reason to suppose that we Americans have yet worked out the best possible solution for all of our common problems, and there is even less reason to believe that our best solution would always be best for other peoples in very different environments and with widely differing historical and cultural backgrounds" (15: 443). The authors pull no punches about the fact that we are and will remain a small minority in the world in which the Asiatic and the African countries with their exploding populations will be in the overwhelming majority (15: 427). This fact imposes on America, they state, an obligation to aid underdeveloped countries and to free ourselves of any trace of belief in racial superiority. After quoting the testimony of Julian Huxley and of H. J. Muller, they say:

> And there is no proof of racial differences in characteristics such as character and intelligence which most people consider more important than appearance. On the contrary, we have instances of extremely high and low intelligence in *all* races, and criminals come in every size and color. . . . Socially-minded racial differences, caused by environment and not by heredity, change rapidly when educational, economic and housing opportunities are open to all groups on a substantially equal basis [15: 439].

It might well be that such blunt writing might cause the textbook to be rejected in some communities or even in some entire states, but apparently the publishers asked for no changes and the textbook is now in its third and very successful edition. The authors do not hesitate to make clear their distaste for the attempts to exclude Negroes in the South from voting by the device of poll taxes or literacy tests which require a "display [of] knowledge of the Constitution worthy of a university professor" (15: 44).

Government in Action includes a subchapter entitled "Making

Our Democracy More Democratic" in which the authors suggest several steps that young citizens might take to work for the improvement of our democratic society. The authors are keenly aware of the special responsibility of America, in this era of competitive coexistence with a powerful and ruthless Communist dictatorship, to grow in strength and to provide an ever increasing measure of freedom and benefits for all its citizens. They are also convinced that social-studies teachers have a responsibility to teach students to "read *critically* and to think straight" (15: vii; italics mine). They end their book with these challenging paragraphs:

> The white light of power which beats upon the United States today challenges Americans as never before. Can we show the world that democracy offers a way of peaceful, productive, free and creative living? Can we keep our civil liberties in the face of hatred and hysteria? Can we solve the problems of inflation, depression and unemployment? Can we give social security to the masses without dulling initiative and ambition in the able? Can we ensure equal opportunity? Can we combine popular control of our government with efficient imaginative management?
>
> The defense of democracy demands more than a salute to the flag, or repetition of citizen's creed, a patriotic speech. *It means the participation of all of us in the great work of building an America in which the ideals of democracy find full realization* [15: 539–40; italics mine].

Government in Action has an excellent section devoted to the United Nations and to the foreign policy of the United States. The authors stress at the outset the principle of the world's interdependence and the responsibility of the richer nations to help the backward ones raise their standard of living. They unequivocally condemn the theory of racial superiority as contrary to scientific knowledge and injurious to our national interests (15: 427–45). The textbook devotes an entire chapter to the United Nations. The text discusses in full and favorably the work of Unesco. The authors do not hesitate to give full indorsement to the United Nations as a strong force for peace. The UN, they say, "provides a place where the representatives of most of the peoples of the world may meet to talk

about their disagreements. As long as they talk, there is some chance of a peaceful solution. . . . In the United Nations peoples of the world have an instrument which potentially offers hope that they may some day achieve a peaceful and free world. In times like these, every such possibility should be explored to the limit" (15: 489).

Let us contrast this forthright position with the treatment of the United Nations in *Our American Government.* Consistent with the determination to be objective and unbiased, the book does not even tender a suggestion of indorsement of the international organization. The text soberly summarizes: "In our country two extreme positions exist in addition to the middle-of-the-road group that supports the U.N. One group wants the United States to depend less on the U.N. . . . They represent the isolationist position. . . . At the opposite extreme are those who feel that the U.N. is not enough. These people believe that only some form of world government can prevent mankind's destruction" (8: 483).

The text does not point out objectively and without bias that the "middle-of-the-road" group includes the United States government, the overwhelming majority of senators and representatives of both parties, the major religious bodies, and, as shown in several opinion polls, over 85 per cent of the American people, who support and believe in the United Nations as a force for peace.

It cannot be maintained, as it has been by some, that textbooks today do say fundamentally what they have been saying for decades before. Far from it. As a whole, they present well-written and well-chosen material prepared by scholars and educators. Pictures, graphs, tests, and documents further enhance the value of today's textbooks. What is needed, however, is a balanced and responsible reappraisal of the policy of omitting or glossing over controversial issues, of avoiding a clear-cut commitment to the fundamental democratic rights and to the obligation to work for the betterment

of our democratic society. There seems to be no valid reason why textbook writers and publishers, who have done so much to improve textbooks in the field of social studies, should not further improve them by making the books not only scholarly and attractive but also stimulating and challenging—better tools for a more effective education of the future citizens of our democracy.

NOTES

1. A. Alexander, "The Gray Flannel Cover on the American History Textbook," *Social Education*, XXIV (January, 1960), 11.

2. Quoted in an article by Fred M. Hechinger, "High School History Textbooks Play It Safe by Avoiding the Tough Issues," *New York Times*, February 14, 1960, p. E–9.

3. E. B. Wesley and S. P. Wronski, *Teaching Social Studies in High Schools* (4th ed.; Boston: D. C. Heath & Co., 1958), pp. 78, 8.

4. J. Quillen, "Successful Teaching in the Social Sciences," in *The Teacher of the Social Studies* (1952 Yearbook of the National Council for the Social Studies [Washington: National Council for the Social Studies, 1952]), pp. 13–14.

5. E. Johnson, "A View of the Future of the Social Studies," in *New Viewpoints in the Social Sciences* (1958 Yearbook of the National Council for the Social Studies [Washington: National Council for the Social Studies, 1958]), p. 220.

6. M. P. Hunt and L. E. Metcalf, *Teaching High School Social Studies* (New York: Harper & Bros., 1955).

7. Ralph Tyler, "Criteria for Curriculum Content and Method," in *The High School in a New Era*, eds. Francis S. Chase and Harold A. Anderson (Chicago: University of Chicago Press, 1958), p. 178.

8. S. E. Dimond and E. F. Pflieger, *Our American Government* (rev. ed.; Philadelphia: J. B. Lippincott Co., 1959).

9. G. N. Clark, J. Edmonson, and A. Dondineau, *Civics for Americans* (New York: Macmillan Co., 1959).

10. *Chicago Sun-Times*, February 13, 1960, p. 20.

11. The publishing company's publicity release attached to the textbook.

12. *Chicago Sun-Times*, January 31, 1960, Sec. 2, p. 2.

13. Herbert A. Thelen, "The Triumph of 'Achievement' over Inquiry in Education," *Elementary School Journal*, LX (January, 1960), 194.

14. *New York Times*, February 14, 1960, p. E–9.

15. R. E. Keohane, M. P. Keohane, and M. Merrick, in consultation with E. Binkley, *Government in Action* (3d ed.; New York: Harcourt, Brace & Co., 1953).

RICHARD S. ALM
University of Hawaii

A Postscript to the Conant Report

Without doubt, *The American High School Today* by James B. Conant is and will continue to be in the decade ahead a widely quoted, influential report on education. Since the book is certain to inspire countless changes across the country, it deserves careful examination. In anticipation of such changes, I should like to add a postscript to one of the recommendations—No. 16: "Developmental Reading Program." Unfortunately, Conant has made an error that is not an uncommon one today: he has used the term *developmental* to describe a reading program that is not at all developmental.

What he advocates is a kind of shot-in-the-arm program of reading improvement, a fragmentary approach to the reading needs of today's students. Conant's recommendation would have a far greater impact on the quality of American secondary education if he had suggested that every teacher teach the specific reading skills needed by the students in his classes.

Too many teachers—along with the public in general—hold the misconception that youngsters should learn reading skills chiefly, perhaps solely, in the primary grades. In contrast, developmental reading assumes that reading is a process that is learned continuously over the years as students move from one level of difficulty to another in material, in types of reading skills, and in breadth and depth of comprehension.

Implicit in this concept are several ideas: first, that one should continue to learn to read as long as one continues to learn anything through reading; second, that one never becomes a "finished" reader; third, that reading is a complex of innumerable skills and abilities.

RICHARD S. ALM is an associate professor of education and director of the Reading Clinic at the University of Hawaii.

Conant recommends that each school set aside a room with certain equipment (not defined in the report) for a program in reading. However, reading instruction—isolated from science, social studies, English, or any other reading subjects—is carried on for the most part in a vacuum. Furthermore, the only essential equipment for a reading program is books. Too often reading programs are built around devices and games rather than around books and other printed material.

Teachers need no special equipment to do a good job of teaching reading. They do need an awareness of their own responsibility for teaching reading, some sensitivity to the specific reading problems presented by the subject matter they teach, and some know-how in teaching reading skills required in their own classes. Obviously the professional preparation of a high-school teacher should include work in reading. But millions of secondary-school students today are denied a necessary part of their learning because their teachers do not know how to teach reading. High-school teachers must, therefore, be provided with in-service training, or they must, on their own, seek professional help in such books as *Problems in the Improvement of Reading* by Ruth Strang, Constance McCullough, and Arthur Traxler and *Making Better Readers* by Ruth Strang and Dorothy Kendall Bracken.

The program outlined by Conant is designed to achieve three goals: "to help students acquire skill in different sorts of reading, from close and detailed reading to scanning; to increase reading speed; and to improve comprehension of the material read." Let us consider each of these goals briefly.

Assuredly, students need to learn reading skills. To be learned most effectively, however, these skills must be related to the subjects the children are studying. No one teacher in the secondary school is prepared to teach all subjects. A teacher can help a student in reading in only one or two subjects.

A workbook or a set of materials designed to give practice in various reading skills is not the solution either. Students may not read up to the level of the material, or they may read beyond it.

What they need is help with the set of reading skills demanded in a particular class.

Detailed reading of a mathematics book in which one must pay close attention to formulas and symbols other than words requires one set of skills. Detailed reading of a history textbook in which one seeks to trace the causes of a particular event requires another set of skills. Those best qualified to teach these two sets of reading skills are not special reading teachers but mathematics and history teachers who recognize the reading task and teach their students how to deal with it.

Work on reading speed must not be merely a drive for faster and faster reading; rather, work on reading rate must be related to the reader, to his material, and to the purposes of his reading assignment. In America we have fallen victim to the notion that with gadgets we can increase our reading speed to thousands of words a minute and that this speed is in itself a desirable goal. It may be well for a business executive to scan some of his morning mail at lightning speed; it would be foolhardy for a student to race through a chapter in his physics textbook. Too often the factors that influence reading speed are ignored. Any desirable program to increase reading rate must take into account the reader, his material, and his purposes. What we seek for our students is versatility, or a variety of reading speeds from which the student can select the one that is most logical for a specific reading situation.

Conant's third goal—improvement of comprehension—is without question the goal of instruction in any subject. Studies of students who fail to achieve in English, history, science, and mathematics attribute many of the failures to students' difficulties in reading those subjects. The teacher who gives attention to the reading skills involved in his subject may save some youngsters from failure; he may help many students whose performance is mediocre to rise to excellence; and he may help outstanding students to become even better. In short, his attention may be of help to all students.

Leaders in the field of reading have been saying for years that every

secondary-school teacher is a teacher of reading, but the statement has become only a shibboleth. It is unfortunate that such a powerful voice as Conant's was raised on behalf of a piecemeal, too often spurious kind of activity, rather than a truly developmental reading program.

Meeting in St. Louis

The Graduate School of Education of the University of Chicago will maintain headquarters at the Sheraton-Jefferson Hotel in St. Louis during the 1961 meeting of the American Association of School Administrators. The headquarters will be open from 9:00 A.M. to 10:00 P.M. every day from March 11 through March 14.

Alumni, former students, and friends are cordially invited to use the headquarters as a place to meet their friends. The headquarters will afford an opportunity to renew acquaintances and to meet faculty members who plan to attend the convention. Members of the faculty will be available to discuss placement and personnel needs.

Book Reviews

Automatic Teaching: The State of the Art edited by EUGENE GALANTER. New York 16: John Wiley and Sons, 1959. Pp. viii+198. $3.25.

Psychologists and educators are showing a rapidly increasing interest in automatic teaching and so-called teaching machines. Teaching machines differ from the traditional audio-visual device in that they frequently require a response from the individual student and then inform him as to the correctness of his response.

Proponents liken the automated devices to ideal individual tutors. The devices embody sound learning principles, supporters say. The machines present carefully programed subject matter in increasing order of difficulty; they require student interaction; the student gains immediate knowledge of his results; learning is consequently highly motivated and efficient. Opponents liken the devices to inhuman mechanical monsters designed to eliminate the teaching profession and place the student's mind in a preplanned strait jacket. But with the world in a wholehearted race toward automation, education can hardly escape.

This book was written by and for theoretical and educational psychologists. It is in no sense an introduction to the field or a handbook for busy administrators who want to know how they can automate a classroom. However, thoughtful educators, preferably educators with some knowledge of experimental psychology, will find in this collection of articles much food for thought and in all probability a generous look into an important segment of the education of the future.

The book is composed of sixteen chapters, each written by a different author. Most of the chapters are based on papers presented at a special conference called by the Air Force at the University of Pennsylvania, a conference at which the editor of the book, Galanter, acted as chairman. The chapters range in scope from a completely theoretical explanation of some teaching machines to a report of a practical experiment in teaching arithmetic to children in elementary school.

One of the more interesting features of the book is the wide range of subjects that have been or are being taught by some automated device. Traditional school subjects like elementary-school arithmetic and spelling, high-school grammar, and college psychology courses are mentioned, as are subjects that may in the near future be part of the public school curriculum: binary arithmetic and maintenance of electronic equipment. As the needs of society change, so will the school curriculum. One argument of the teaching-machine people is that the automated devices can sometimes teach a subject even when there is no qualified human teacher available.

If the range in curriculum material is wide, the range in complexity of devices is just as great. Rath, Anderson, and Brainerd at International Business Machines used a digital computer with typewriter input-output as a teaching machine for teaching binary arithmetic, while Douglas Porter at Harvard taught elementary spelling with a simple write-in type teaching machine that probably cost less than fifty dollars.

In fact, a machine per se does not even seem necessary; Norman Crowder of Hoover Electronics Company and Lloyd Homme and Robert Glaser of the University of Pittsburgh used special adaptations of books. Homme and Glaser taught statistics using a programed textbook that has each page divided into panels. The student reads a bit of information and then a question about it; he responds to the question, turns the page, and checks his answer against the answer printed in a corresponding panel on the overleaf. Crowder has an even more ingenious arrangement in his scrambled book: the student is given a bit of information and then asked a multiple-choice question about it. The student responds by turning to a page indicated adjacent to his answer choice. If the student's choice is correct, the answer page starts out: "Your answer was correct and now you are ready for the next step . . ." (which is then followed by another problem). If the student is wrong, the page might say: "Sorry, your answer was wrong; apparently you do not understand that . . . now return to the original page and try again." Crowder is concerned with effective use of error responses.

Readers who enjoy intellectual controversy will not find the book lacking. Many of the authors seem to enjoy taking academic potshots at one another, at the whole field of education or psychology, and occasionally even at themselves.

After attempting to summarize the factors in learning efficiency, Gagne and Bolles conclude, in the longest chapter in the book, that the teacher or machine-designer "must employ a good deal of art and not much science." This seems to be in contrast to the feelings of B. F. Skinner and his followers who talk about the "science of behavior" and put forth some rather definite principles (see Beck's chapter on methods of programing). In case there is any doubt about Gagne and Bolles' target, they discuss the "obvious disadvantage of Skinner's procedure" in using cues or stimulus supports.

A. A. Lumsdaine, who has written an interesting chapter on the use of other types of automated teaching, such as filmed courses, gives experimental evidence favoring the use of cues.

Patriarch of the conference, Sidney L. Pressey, whose life has been spent in educational psychology (and who incidentally developed the first teaching machine in 1925) states that Gagne and Bolles "seem unaware of the many careful investigations . . . [appraising the effectiveness of learning] in education and applied psychology." But Pressey also has a few cannon blasts for favorite target Skinner and his followers, when he points out the occasional uselessness of careful step-by-step progress in such experiments as the Ford Foundation study, which had students successfully skipping two whole years of high school, and, as Pressey points out, thereby skipping "a possible great pile of programmed matter."

On a theoretical level David Zeaman points out that Professor Skinner's revolutionary new teaching machines resemble the common old memory drum, while Howard Kendler of the New York University states that "Professor Skinner seems to be ignoring the problem of transfer."

Like the eye in the center of the hurricane, B. F. Skinner remains calm and in his chapter proceeds to substantially modify one of his own principles—successive approximation—as it applies to the teaching of verbal material in a teaching machine. (His earlier writings stirred much of the controversy as well as much of the interest in the teaching-machine field.) He states: "Shaping a written response through the differential reinforcement of progressively more adequate forms is uncertain and inefficient." Instead he advocates other methods such as *vanishing*, or "teaching the spelling of a word by first showing it in its entirety and then having the student supply missing parts until he writes the whole word."

Donald Smith of the University of Michigan even has some comments on the type of personality teaching-machine programmers (those authors who write the curriculum material that goes into the machine) should have. They should be, he suggests, "classical introverts."

Smith also reports testing out a grammar program on seventh-graders who were slow learners (intelligence quotient 75 to 90) and receiving a high percentage of correct replies. Porter found that bright students had a high rate of responding; when sixth-graders were given materials ad lib, they completed their spelling work in a relatively short time. These reports seem to be in accord with the general claim that teaching machines provide for both bright and dull students by, among other ways, providing complete individual flexibility in rate.

In a boldly written introduction, Editor Galanter seems to have ventured well out on a limb, and this reviewer would be among the first to hand him a saw. In discussing the crucial issue of the type of responses a student should make while working on a teaching machine, namely, constructed

(write-in) versus multiple-choice responses, Galanter states: "we do not beg the issue: we simply decide it. . . . All verbal teaching is digital and therefore multiple choice. . . . Only the choice set has been enlarged." Professor Galanter seems to have completely overlooked a basic fact developed in years of work in the experimental psychology laboratories: the two methods of responding also fall neatly into the well-established categories of *recall* versus *recognition*. Quite possibly there are other issues that bear on the dichotomy because most factors in learning are far too complex to be "simply decided."

On the issue that some authorities have criticized teaching machines as not incorporating the findings of psychological theory, Galanter again asserts: "Our thesis is quite the opposite. These machines, when they work, are a theory of teaching." This seems a little like stating that a bucket of water is a theory of physics—a rather limited view and gross oversimplification.

Galanter's chapter also clearly outlines many of the unresolved issues related to automatic teaching at the present state of the art, and possibly gives a distant glimmer of the future, when he states that "an optimum machine should be able to make plans for itself, and also be able to diagnose the plans and ideas that the student has formed." Perhaps the new self-organizing computers are beginning to dabble with this internal planning concept, but apparently the only role that teaching machines are likely to fulfil in the foreseeable future is one that is definitely subordinate to the human teacher.

The education profession may one day be indebted to the many fine scholars and their work which is represented in this small book. Congratulations are in order to Editor Galanter, the Air Force Office of Scientific Research, the University of Pennsylvania, and John Wiley and Sons, who all contributed to making this book a milestone in the field of automated teaching.

EDWARD FRY

Loyola University of Los Angeles

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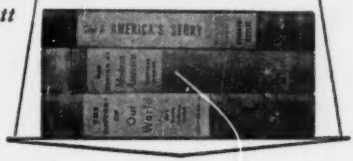

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